

Consulting Engineers and Scientists

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7 September 2005

Mr. Mohammad Zaidi California Regional Water Quality Control Board Los Angeles Region 320 West 4th Street, Suite 200 Los Angeles, CA 90013

Subject: Transmittal of Logs for Deep Borings PB42 through PB50 for the

Former Price Pfister Site at 13500 Paxton Street Pacoima, California

(EKI A20034.09)

Dear Mr. Zaidi:

As requested, enclosed are copies of borehole logs from the recent deep drilling activity related to the former Price-Pfister site in Pacoima, California. Results of groundwater sampling associated with deep borings PB42 through PB50 were reported in the Results of Grab Groundwater Sampling, Phase 2 - Saturated Zone Investigation Report, dated 17 June 2005.

Please call with any questions or if additional information is needed.

Very truly yours,

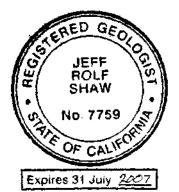
ERLER & KALINOWSKI, INC.

mes mentose for Steven G. Miller, P.E.

Project Manager

cc: Arthur Heath, RWQCB David Bacharowski, RWQCB Linda Biagioni, Black & Decker Lorraine Sedlak, Black & Decker Eileen Nottoli, Allen Matkins

Jeff R. Shaw, P.G. Hydrogeologist





BOREHOLE LOUVIE	St. at Sutter St	t., Pacoima	ı, CA			BOREHOLE / WELL NAME	PB-42	2	
DRILLING Proson	ic, Inc.	·				PROJECT NAME	Price	-Pfister	
DRILLING Sonic			•		· · · -	PROJECT NUMBER	EKI A	20034.0)3 T2
CONDUCTOR N/A			DIAMETER (inches)	FROM (feet)	то	DATE STARTED	5/2/05	DATE COMPL	ETED 5/6/0
BLANK N/A CASING			DIAMETER (inches)	FROM (feet)	то	BOREHOLE DIAM (inches)	6.0	TOTAL (feet)	DEPTH 268
PERFORATED NIA CASING	·		DIAMETER (inches)	FROM (feet)	то	DATUM	MSL; SP	'CS Zone	÷ 7 NAD27
GROUT High Pe	rcent Solids Be	entonite Si	urry	FROM 0.0 (feet)	^{TO} 268.5	TOP OF CASING		GROUN SURFA	
SEAL N/A				FROM (feet)	TO	LOGGED BY	Jeff Shav	w, RG #7	759
FILTER N/A				FROM (feet)	70	CHECKED BY	Jeff Shav	w, RG #7	759
SA	MPLES	· · · · · · · · · · · · · · · · · · ·		<u>.</u> -					WELL
TIME COLLECTED SAMPLE NAME SAMPLE TYPE	RECOVERY (feet) BLOW COUNT	OVM (ppmv)	MATERIAL I	DESCRIPTION	CSCS CODE CRAPHIC LOG				
	5.5	0.1 5 2.5 10	sand; loose. 6 ft: Increased m SAND WITH GRA grained sand; loos to medium graine	YR 4/3]; mediiu fine to mediuu iter on long ax oisture to very VEL; Brown [se; dry; 20% fi d; loose.	um to coarse in gravel; cot is; magnetite moist. 10YR 5/3]; fir ne gravel; 5%	grained sand; obles common up grains commonin te to medium 6 silt; sand is fine	SW SW		

PROJE			eter	700, 4	01,011	PRO	DJECT	EKI A20034.03 T2	BOREHOLE /	PB-4	12		inc.
NAME	7 1100	_	AMPLES		_	NUN	ABER 		WELL NAME				
TIME	SAMPLE NAME	SAMPLE TYPE	T	BLOW COUNT	ОУМ (ррти)	DEPTH (feet)		MATERIAL DESCRIPTION AND DR	ILLING NOTES		USCS CODE	GRAPHIC LOG	WELL CONSTRUCTION
		海里中	9		11.9 6.8 1.3 15.1 13.2	45	loose med constant for the constant for	: Cobbles. : 6-inch interval of weathered granitic ular iron-oxide stained clay beds (<1 classes of the color) in the color of the col	moist; 30% fine to y weakly eds of sandy clay, cose to moderately rocks and thin m thick). Town [10YR 5/4]; 1% fine gravel, 20% erate dry strength; ular intervals; weak cose to moderately ocally enriched in thange to dark	5.▼	SM I		
120,000 FPF-UREP-WELLS GPJ EKIF VS GDT 8/30/05	PB42- 66-77	中海市中京中市 在李市中中海车车中市	10		0.3	70 75 75 75 75 75 75 75 75 75 75 75 75 75	SILT soft; v	D; Dark grayish brown [10YR 4/2]; me ed sand; rounded to subrounded; loos um gravel; medium to coarse sand; rounded grains; loose. Y SAND: Brown [10YR 4/3]; fine grainwet; 25% silt; fine-grained; dense to so wet; 5% fine to medium gravel; medied; rare cobbles up to 3-inches diame	e; wet; 5% fine to unded to ed sand; dense to oft. e grained sand; um to coarse		M P		



	ehole &	we	II Co	nstru	ction			1	$\stackrel{\smile}{-}$		Inc.
PROJE NAME	Price	e-Pfis	ter			PRO NUN	DJECT EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-42		
	_	SA	MPLES	3							
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)	MATERIAL DESCRIPTION AND DRIL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTION
11:30	PB42- 93-100	正在生中 非不在此 李次本 在	13		0.0	95 -	SAND; Brown [10YR 4/3]; medium to coars; loose; wet; 5% fine to medium gravel; medii grained; rare cobbles up to 3-inches diamet	um to coarse	SP		
			17		0.3	105 —					
					0.6	115 —	SAND; Dark grayish brown [10YR 4/2]; roun subrounded; soft to moderately soft; wet; 10 silt; grains rounded to subrounded; decomporately soft to moderately so	% fine gravel, 5% osed biotite-rich	sw		
	PB42- 127.5- 128		0.5 1.3		1.0	125	125 ft: Gradual increase in gravel to 20%. SILTY SAND WITH GRAVEL: Dark yellowis [10YR 4/4]: soft to moderately hard; wet; 25' gravel; 20% silt; cobbles greater than 2-inch	% fine to coarse	SM		
			8.5		0.0	135	SAND; Light yellowish brown [10YR 6/4]; me grained sand; loose; wet; 5% fine gravel; ran 6-inches of fine to medium sand; loose, wet.	edium to coarse e intervals of up to	SP		
6:35	PB42- 143-150 PB42-		13		4.7	45					



PROJECT Price- NAME	Pfister		PRO NUN	JECT EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-42		
	SAMPLES	· · · · · · · · · · · · · · · · · · ·				(1)	9	WELL
TIME COLLECTED SAMPLE NAME	SAMPLE TYPE RECOVERY (feet)	BLOW COUNT OVM (ppmv)	DEPTH (feet)	MATERIAL DESCRIPTION AND DRI	LLING NOTES	USCS CODE	GRAPHIC LOG	CONSTRUCTIO
143-150	19	8.8	190	SAND WITH GRAVEL AND SILT: Brown [1 moderately hard to loose; wet; 20% fine to silt: cobbles up to 3-inches diameter community foot thick of predominantly sand or silt cohard to loose, wet. 160 ft: Increasing cobbles. 164-168 ft: Up to 30% cobbles. SAND WITH GRAVEL; Light yellowish brown loose to soft; wet; 15% medium to coarse grobbles greater than 3-inches diameter; loo 170 ft: Cored cobble. SANDY SILT WITH GRAVEL; Light yellowish brown [10YR 6/4]; hard to soft; wet; 15% medium to coarse grobbles greater than 3-inches diameter; loo 170 ft: Cored cobble. SANDY SILT WITH GRAVEL; Light yellowish brown [10YR 5/4]; his coarse sand; 10% fine to medium gravel; semiconsolidated; commonly rubblized; interesions thick with up to 20% clay; brittle; cidecomposed granitic rocks; hard; dry. 193 ft: Thin clay beds interbedde and sand.	h brown ne to coarse o soft. h brown ard; dry; 40% fine 5% clay; rvals up to asts mostly	SW-SM		
	7	1.9	200 —					



PROJE	<u> </u>			nstruc	uon		DJECT ENLARGORA OR TR	BOREHOLE /	PB-42	1 1	Inc.
NAME	Price			-			MBER EKI A20034.03 T2	WELL NAME	PB-42		
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)		OVM (ppmv)	DEPTH (feet)	MATERIAL DESCRIPTION AND DR.	ILLING NOTES	ASCS CODE	GRAPHIC LOG	WELL CONSTRUCTA
			7		2.7	205 -	SANDY SILT WITH GRAVEL; Light yellow [10YR 6/4] to yellowish brown [10YR 5/4]; to coarse sand; 10% fine to medium grave semiconsolidated; commonly rubblized; int 6-inches thick with up to 20% clay; brittle; decomposed granitic rocks; hard; dry. From 209-212 ft: Cored cobbles less than common; core somewhat scrambled due to	hard; dry; 40% fine I; 5% clay; ervals up to clasts mostly 4-inches diameter	ML		
09:30	PB42- 214- 221, PB42- 214- 221D	· \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	3		0.0	215	SAND; Yellowish brown [10YR 5/4]; fine to sand; dense; wet; 5% fine gravel, 5% silt; so coarse; rare cobbles up to 3-inches on long weathered but not completely disaggregate granitic rocks common; dense.	sand is fine to g axis; very	SP		
		\$ \$	7			220 -	SAND WITH GRAVEL; Brown [10YR 5/3]; coarse gravel; clasts of decomposed grani rare iron-oxide staining localized on some >3-inches diameter; much of core from 220 by drilling; wet.	tic rocks common; clasts; rare cobbles	- sw		
				c	2	30 —	SANDY SILT; Light olive brown [2.5Y 5/4]; hard; dry to moist; 5% gravel, 45% fine to relay; clasts of sandstone common (sandstone fine-grained).	nedium sand, 5% –	MĹ		
			11		8.5	35 -	235.5 ft: Core is completely pulverized; grafragments common. 237 ft: Fragments of thin interlaminae/interclay; crenulated; rare slip planes in clay with sand is pale yellow, clay is light olive brown.	beds of sand and h slickensides;			
		+	4		3.4	45	239 ft: Cobbles cored.				
	PB42- 252- 252.5		0.6 0.4		(. 4	55	From 250-251 ft: Weak indistinct bedding a completely rubblized; moderate iron-oxide significant signi	moderately hard; vel, 30% fine to e/sandstone clasts; peds of fine to	d		

1-EKI STD - BH AND MW LOG PPF-DEEP-WELLS GPJ EKIF VS GDT 9/30/05



<u>Borehole</u>	& W	ell Col	nstru	ictior				<u> </u>		Inc.
PROJECT NAME	Price-Pfi	ster			PRO NUI	DJECT EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-42		
TIME COLLECTED SAMPLE	<u>μ</u>	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)	MATERIAL DESCRIPTIÓN AND DRIL	LING NOTES	USCS CODE	GRAPHICLOG	WELL CONSTRUCTION
PB4 265, 266	2-	DOJAN 15	BLOW	0.0	260 — 265 — 275 — 280 — 285 — 295 —	SANDY CLAY; Very dark gray [10YR 3/1], r slightly moist to dry; 5% fine to medium gramedium sand; very finely laminated siltstone weak local consolidation; very thin chaotic timedium sand common; beds are distorted, moderately hard; moist. Total Depth of Borehole = 268.5 feet.	moderately hard; vel, 30% fine to el/sandstone clasts veds of fine to truncated;		ORA GRA	

1-EKLSTD - BH AND MWLOG PPF-DEEP-WELLS GPJ EKIF VS GDT 8/30/05



Borehole & W	ell Con	structio	n Lo	g				<u> </u>	<u> </u>	Inc.
BOREHOLE Bradie	ey St. at Lo	uvre St., Pa	acoima	a, CA		· · · · · · · · · · · · · · · · · · ·	BOREHOLE / WELL NAME	PB-43		
DRILLING COMPANY Proso	nic, Inc.						PROJECT NAME	Price-	Pfister	
DRILLING Sonic		<u></u>					PROJECT NUMBER	EKI A	20034.0	03 T2
CONDUCTOR N/A	4			DIAMETER (inches)	FROM (feet)	TQ	DATE STARTED	5/9/05	DATE COMPL	ETED 5/13/05
BLANK NIA CASING	4			DIAMETER (inches)	FROM (feet)	TO	BOREHOLE DIAM (inches)	6.0	TOTAL (feet)	DEPTH 252
PERFORATED NA CASING	¥			DIAMETER (inches)	FROM (feet)	TO	DATUM	DATUM MSL; SPCS Zone 7 NAI		
ROUT High F	Percent Sol	lids Bentoni	ite Şlu	rry	FROM 0.0 (feet)	TO 252.0	TOP OF CASING		GROUI SURFA	
EAL N/A	١			<u></u>	FROM (feet)	TO	LOGGED BY	Jeff Shav	v. RG #7	759
ILTER N/A	`				FROM (feet)	то	CHECKED BY	Jeff Shav	v, RG #7	759
	44DL 50								1	
	AMPLES			-				<u> </u>	90	WELL
COLLECTED SAMPLE NAME SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT OVM (ppmv)	DEPTH (feet)	MATERIAL I	DESCRIPTIOI	V AND DRIL	LING NOTES	USCS CODE	GRAPHIC LOG	CONSTRUCTION
	7.5		10 -	ASPHALT SAND WITH GRA grained sand; loos is subangular to si common; dark sta apparent oily coat extensive; loose. SAND WITH GRA loose; moist; 20% rare coarse gravet subrounded; loose subrounded; loose SANDY SILT WITH moderately soft; m lesser fraction of m soft. SAND WITH GRA	be; moist; 20% ubrounded; coined layer 1-ir ing on clasts; VEL AND SIL fine to medium (>2-inches di	yellowish br grained sangerse grained sangerse grained sangerse grained sangers in being to control of the cont	se gravel; gravel 6-inches diameter .5 feet bgs with ght, not vertically brown [10YR 5/4] % silt, 5% ctay; sts are generally own [10YR 4/4]; d, 10% ctay; sand; moderately	SW- SM		



PROJECT Price-Pric	<i>'eli Construc</i> i fister	PRO	JECT EKI A20034.03 T2	BOREHOLE /	PB-43	1 \1	Inc.
IVAIVE	SAMPLES	NUM	BER	WELL NAME			
 		OVM (ppmv) DEPTH (feet)	MATERIAL DESCRIPTION AND DRIL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTION
	3	40 —	SAND WITH GRAVEL AND SILT: Yellowish as above, but commonly with intervals of sal and shattered fragments common.	brown [10YR 5/4]; ndy silt; cobbles	SW- SM		
	5	45	SAND WITH GRAVEL AND SILT; Dark yello [10YR 4/4]; loose; moist to slightly moist; 20 gravel, 10% silt; common with thin interbeds sand; cobbles; loose. 46-47 ft: 2-4-inch intervals of well sorted, me	% fine to medium of well-sorted	SW- SM		
	9.5	50	grained sand common. 52 ft: Rock flour, cored cobbles, and boulde	irs.			
	10	55 — 60 —	57-59 ft: Rock flour, cored cobbles and boul common.	iders very			
	10	70 —		5/9/2005	Z.		
08:45 PB43-	10	80	SAND; Brown [10YR 4/3]; medium to coarse cose to moderately dense; wet; 5% fine gray moderately dense.		SP		
 	20	.8 85 -	SAND; Dark yellowish brown [10YR 4/4]; fine grained sand; dense; wet; 5% silt; dense.	e to medium	SP		



		,,,	·11 OO	1300	CHOI	า Log					<u> </u>	Inc.
PROJEC NAME	CT Price	-Pfis	ter			PRO NUI	OJECT MBER	EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-43	<u> </u>	
COLLECTED	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	ОVМ (рртv)	DEPTH (feet)		MATERIAL DESCRIPTION AND DRILL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTI
			 		1.8	-	<u>SAN</u> grair	D; Dark yellowish brown [10YR 4/4]; fine led sand; dense; wet; 5% silt; dense.	e to medium	SP		
					1.2	95 -		6 ft: Interval of dark brown sand (10YR:	3/5).			
11:55	PB43-	主字甲布电子	20		3.9	100 —	SAN mode to su	D WITH GRAVEL; Dark brown [10YR 3/ erately dense; wet; 20% fine to medium brounded; biotite rich intervals common; erately dense.	gravel; rounded	SW	0.00.5	
	100-107	电子 电子 电电子			1.0	105 ~						
					0.2	115						
			20		0.6	120 —						
			}		3.1	125 -	coars fine to comm	DWITH GRAVEL; Dark grayish brown [1] e grained sand; loose to moderately der b coarse gravel; cobbles up to 3-inches non; clasts are rounded to subrounded; leading to the subrounded;	nse; wet; 15% diameter	SW		
		+	4		6.8	130 —						
						135	132 ft of sar	: Increasing gravel content to 25%; gen id and gravel; cored cobbles and boulde	ieral coarsening ers very common,		. O.	
			20		2.2	140						
17:05						145 —	wet; 4	PY CEAY WITH SILT; Brown [10YR 4/3]; 0% fine sand, 30% silt; micaceous; moc ;: Brown [10YR 4/3]; fine grained sand; ove; dense.	derately soft.	∫ CL SP		



PROJE NAME	CT Price	-Pfis	ter				OJECT MBER	EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-43		
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY THE (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)		MATERIAL DESCRIPTION AND DRIL	LLING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTIO
17:05	PB43- 146-153	*****	20		3.5	150		2; Brown [10YR 4/3]; fine grained sand ive; dense	d; dense; wet;	SP		
		2 H H H H			9.7			: Cored boulders.				
			8		6.7	155 —	to me- interb	2: Brown [10YR 4/3]; fine to coarse gradium gravel; cobbles and boulders >4 eds <6-inches with medium to coarse : Cored boulder of weathered decomp	-inches common; sand common.	\$P		
		 			7.1	160	mediu	NITH GRAVEL; Yellowish brown [10] Im grained sand; loose; wet; 15% fine unded to subangular; cobbles are rare	to medium gravel;	sw	, O.	
			13		11.0	165 —						
					16.1	1170 —					$\dot{\circ},\dot{\circ},\dot{\circ},\dot{\circ}$	
					12.1	175 — - -	176-17	77 ft: Cobbles common.				
			15		4.8	180	10% fi stainin mediui	WITH SILT; Yellowish brown [10YR 6] ne to medium gravel, 10% silt; moder g locally in sand; sand is fine grained m grained intervals; dense. WITH GRAVEL; Brown [10YR 5/3]; locally in the same of the	ate iron-oxide with some local	SW- SM	5 . 	
		+			6.2	185 —	dense	; moist to wet; 25% fine to medium gra inded to subangular; loose to modera	avel, 5% silt;		. O	
	ļ	+	4		61.9	190	192 ft:	Cored boulder approximately 9-inche	es in diameter.		, O.	
			9.5		24.8	195 -	hard; s	SAND WITH GRAVEL: Brown [10YR ilghtly moist to dry; 35% silt; 15% fine dense to hard.	5/3]; dense to to medium	SM		
2:35		李丰丰多年	10			200	grained subrou	WITH GRAVEL: Brown [10YR 5/3]; fir is sand; loose; slightly moist to dry; 15 inded to angular; loose. 1-foot rock flour and cored fragments	% fine gravel;	sw		

1-EKI STO - BH AND MWLOG PPF-DEEP-WELLS GPJ EKIF VS GDT 8/30/05



PROJ.				,01,0	00.01	PRO	DJECT	EKI ADI	0034.03 T		BOREHOLE /	PB-43		l Inc.
NAME	FIICE					NUN	ABER .	ENIAZO	0034.03 17		WELL NAME	70-45	Τ	· · · · · · · · · · · · · · · · · · ·
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)	ħ	MATERIAL	DESCRIP	FION AND DF	RILLING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTION
12:35	PB43- 200- 210, PB43- 200- 210D	中华 中東 市 東 市 安 米 本 年 头 上	10		11.0	205 —	SAND hard to 5% fin	al intervals; OF SILT; Da	otherwise Ink grayish Ink gra	massive; unifo brown [10YR 35% fine to co	wet; 5% fine gravel orm; soft. 4/2]; moderately oarse grained sand, ders at 210 feet;	SP		
			10.5		19.0 7.6	215	SILTY fine to moist; lamina with la	SAND WIT medium gr 20% silt; 18 ations 3mm minations of	TH GRAVE rained sand 5% fine gra -10cm thick	f; moderately ivel; 5% clay; care common ; sand units lo	prown [10YR 5/4]; hard to dense; dry to thin beds or t; rarely interbedded ocally host mild to hard to dense.			
			17		4.5	225 —	commo	on; core so	mewhat so		ches diameter to hard drilling.			
					1.9 4.5	235	231.5 f SAND 30% fir distorte SAND gray sa sand; 1 local in	ft: Core is of Y CLAY; Dane sand; sand; or CLAY WI and [10YR : 15% sitt; into tervals are	completely ark brown [and has str r interbeds ITH SILT; V 5/1] interbe erbedded, sand but of	disaggregate 10YR 3/3]; mong iron-oxide crude oil odd ery dark gray ds; slightly m with chaotic, i ore is still dry	d granitic rocks. oderately soft; moist; e staining; occurs as or; moderately soft, r clay [10YR 3/1] and oist to dry; 30% fine irregular bedding; ; clay thinly	<u> </u>		
		,	8		6.4	240 —		6d with sut		slip planes co	ommon.			
		+	1.5		2.2	250		epth of Bor						
						255 —						1		



BOREHOLE LOCATION	13500 Paxton St., Pacoi	ma, CA	·		BOREHOLE / WELL NAME	PB-44	4	
DRILLING COMPANY	Prosonic, Inc.				PROJECT NAME	Price	-Pfister	
DRILLING METHOD	Sonic		<u></u>		PROJECT NUMBER	EKI A	.20034.03 T2	-
CONDUCTOR CASING	N/A	DIAMETER (inches)	FROM (feet)	то	DATE STARTED	5/31/05	DATE COMPLETED	6/6/05
BLANK CASING	N/A	DIAMETER (inches)	FROM (feet)	<i>TO</i>	BOREHOLE DIAM (inches)	6.0	TOTAL DEPTH (feet)	300
PERFORATED CASING	N/A	DIAMETER (inches)	FROM (feet)	TO	DATUM	MSL; SF	CS Zone 7 NAD	27
GROUT	High Percent Solids Bent	tonite Slurry	FROM 0.0 (feet)	^{7O} 300.0	TOP OF CASING		GROUND SURFACE	1034.62
SEAL	N/A		FROM (feet)	то	LOGGED BY	Jeff Shav	w, RG #7759	
FILTER PACK	N/A		FROM (feet)	то	CHECKED BY	Jeff Shav	w, RG #7759	
REMARKS	OVM readings shown are a	unreliable due to extreme he	at of the core prod	duced by son	ic drilling.			

			SA	MPLES							
	TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)	MATERIAL DESCRIPTION AND DRILLING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTION
HEKISTO - BH AND MWLOG PPF-DEEP-WELLS GPJ EKIF VS GDT 8/30/05				10		1.8 10.2 0.0 2.2 9.1	10	SAND WITH GRAVEL; Dark grayish brown [10YR 4/2]; 20% fine to coarse gravel; 5% silt, gravel is angular to rounded; loose, dry to moist. 3.0-3.5 ft: 6-inch interval of medium-grained sand; magnetite grains common. 7.0 ft: Rock flour and cobbles common in core. SAND WITH SILT AND GRAVEL; Dark yellowish brown [10YR 4/4]; 20% fine gravel; 10% silt; loose, moist to dry. 16.0 ft: 4-inch interval of silty sand with thin, indistinct bedding.	SW- SM		

1-EKI STO - BH AND MWLOG PPF-DEEP-WELLS GPJ EKIF VS GDT 8/30/05



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PROJ. NAME		-Pfis	ter			PRO NUM	DJECT EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-44	· · · · ·	
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	ОУМ (рртv)	DEPTH (feet)	MATERIAL DESCRIPTION AND DRIL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTION
			9		3.6	-	SAND WITH SILT AND GRAVEL; Dark yello [10YR 4/4]; 20% fine gravel; 10% silt; loose; SILTY SAND WITH GRAVEL; Dark grayish	moist to dry.	SW- SM		
			10		31.0	40 -	20% fine to medium gravel; 15% silt, 5% cla to subrounded; silt- & clay-enriched intervals beds of approximately 1-cm thickness prese finer-grained intervals locally competent; loo	y; gravel rounded s common; clay ent but rare;			
		+	2.5		32.0 158	45 -	48.0 ft: Cobbles and rock flour.				
					521 362 33	50 —	53.0 ft; 1-foot interval of silt with sand; mode	5/31/2005 erately hard;	 		
			17		9.2	55 —	moist. SAND WITH GRAVEL: Dark yellowish brown fine gravel; sand fine to medium grained and moderately-sorted; loose to soft; wet.	n [10YR 3/4]; 15%	<i>3</i> sw	0000	
					16.3	65 -	63.0 ft: Thin (1 cm) intervals of grey clay loc	ally common.			
08:30	PB44- 67				15.4	70 —	68.0 ft: Gradual color change to dark grey-b very dense with silt up to 10% over interval.	rown (10YR 4/2);			
	:				13.2	75 —	SAND WITH GRAVEL, Dark grayish brown [fine to coarse gravel; sand medium to coarse to well-sorted; black definal mafic mineral gray hombiende) common; gravel subrounded to common to 4-in diameter; dense to moderate	e and moderately- ains (possibly rounded; cobbles	sw		
			20		3.9	80					
			:		10.9	85					
	; 	+	20		4.6	90 -	SAND: Dark grayish brown [10YR 4/2]; 5% fi rounded to subrounded; sand medium graine rare cobbles to 3-in diameter; loose; wet.		SP		



		***	· · · · · · · · ·	7,01,0	(CtiOi	1 Log			1		<u> </u>	Inc.
PROJE NAME	EGT Price	-Pfis	ter			NUI	DJECT MBER	EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-44		
COLLECTED	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)		MATERIAL DESCRIPTION AND DRIL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTI
					0.0	-	roun	D; Dark grayish brown [10YR 4/2]; 5% ded to subrounded; sand medium grain cobbles to 3-in diameter; loose; wet.	fine gravel; gravel ned & well sorted;	SP		
13:00	PB44- 100-107	电四次 作中等 五南京中華	20		9.2	95	fine inter	ID WITH GRAVEL; Dark yellowish brow to coarse gravel; 5% silt (up to 30% silt vals); gravel is rounded to subangular; neter common; dense to moderately sof	tocally over < 6-in cobbles to 4-in	sw		
			10		0.0	110						
			10		0.0	120 —	SAN' to mo	⊇; Brown [10YR 5/3]; medium grained; oderately dense; wet.	well-sorted; loose	SP		
					-	130 —	to coa	D WITH SILT AND GRAVEL: Brown [10 arse gravel; up to 15% silt; gravel is roungular; rare silty intervals to 3-in thick; of 4-in diameter rare; soft to moderately s	inded to cobbles common	SW- SM		
			14		0.0	135 —		I-134.0 ft: Cobbles common.				
			10		1.3	140				SP- SC		



PROJE				,,,,,,		PR	OJECT	EKI A20034.03 T2	BOREHOLE /	PB-44	-	inc.
NAME						NUI	MBER	ERI A20034.03 12	WELL NAME	75-44	T	
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY THE (feet)	BLOW COUNT	ОУМ (рртv)	DEPTH (feet)		MATERIAL DESCRIPTION AND DRILL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTION
09:10	PB44- 150- 157, PB44- 150- 157D	在是事學是中的有事情的學出	8		33.0	150	10% mod perv sanc SAN med diam to m	ID WITH CLAY; Very pale brown [10YR silt; thin (1-2 mm) clay interbeds locally erately intense iron oxide staining commately intense iron oxide staining commately intense of gred; moderately hard to soft; moist. ID WITH GRAVEL: Pale brown [10YR 6/imm gravel; rounded to subrounded; cobleter common; cobbles subangular to suboderately soft; wet.	common; ion; stain y unoxidized 3]; 15% fine to bles to 4-in brounded; loose	SP- SC SW		
			16.5		9.0	160 ~	10% 5mm beds mod sligh	Y CLAY; Very dark grayish brown [10YF fine to medium sand; locally to 50% sand laminated to bedded intervals; sand grees commonly distorted, chaotic; soft to moverately strong petroleum ("crude oil") odd thy moist.	id in <1mm to by [10YR 5/1]; derately hard; or; moist to	CUML		
			6		3.2	175	lamir <u>CLA</u> 30% 1mm	one of grey sand, commonly irregular and YEY SAND; Dark greenish gray [10Y 3/1 clay; sand is fine, grey; sand/clay/silt into 30cm thickness; beds locally distorte emiconsolidated; hard; slightly moist to demiconsolidated.	d distorted.]; interbedded; erbeds vary from d; some intervals	- sc		
		+	6		2.7	185 -	SANI color SANI sand; interb	0-183.0 ft: Core reworked during drilling, on features. 2) Olive brown [2.5Y 4/4]; massive; particle); wet. DY CLAY: Dark greenish gray [10Y 3/1]; commonly interbedded as above (171-1) eds chaotic and distorted; slip planes of lation common; moist to dry.	ally oxidized (by 35% fine grey 183 ft interval);	SP CL		
		+	10		177.2	190 —	190.0 SAND yellov odor a	9-193.0 ft: Core is essentially dry. 2: Very dark gray [10YR 3/1]; grading do v [2.5 Y 6/6]; 5% silt; strong hydrocarbor at top of interval, decreasing with depth assing oxidized color; dense; wet; massive	n ("crude oif") and with	SP		
			8.5		96.5	200 -	comm	EY <u>SAND</u> ; Very dark gray [10YR 3/1]; to nonly interbedded, chaotic; beds range folick; hard; brittle; moist to dry.		SC		



PROJECT	Price-F		er				OJECT	EKI A20034.03 T2	BOREHOLE /	PB-44		
NAME		SAI	MPLES			NO	MBER	·	WELL NAME_			
TIME	NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)		MATERIAL DESCRIPTION AND DRIL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTIO
17:30 PE 203		************	8.5		11.0	205 — 210 — 215 —	mas hydr 206. SAN parti banc interi 209. brow SAN suba dens	D WITH GRAVEL; Brown [10YR 4/3]; 1 ngular to subrounded gravel; clasts gra e to loose; moist.	ide stain is coarse grained; ely intense e oxide staining; o irregular dark 5% fine to coarse nitic & volcanic;		. 0	
			7		10.0	220 225	4-inc	Y SAND; Gray [10YR 5/1]; 30% silt; ran h diameter; soft to moderately soft; moi	st to wet	SM		
			10		3.0	230 —	subro hard	D WITH SILT; Olive [5Y 4/3]; 10% round bunded gravel; variable silt to 20%; sand to loose; moist. If: Core is predominantly weathered go to flakes are very common.	d is fine to coarse	SW- SM		
			10		4.2	240	<u>SANI</u> Core	D WITH SILT: Dark greenish gray [10Y is completely disaggregated granitic roo	4/1]; 231.5 ft: cks.	SW- SM		
15:00 PB4 253-			13		4.5	250 —	253.0 groun	ft: Moderate oily odor and sheen noted dwater sample from 253-260 ft.	d in grab			



NAME PICE-PISCEI NUMBER ERI AZUUSA.US 12 WELL NAME PE-44 SAMPLES WELL NAME PE-44 WELL NAME PE-44 WELL NAME PE-44	Borenole & V	1001	, 00	1300	ictioi			<u></u>			1	Inc.
MATERIAL DESCRIPTION AND DRILLING NOTES SAND WITH SILT. Dark greenish gray [10" 411]. 231.5 ft. SM. 113 Seo SAND WITH SILT. Dark greenish gray [10" 411]. 231.5 ft. SM. 113 Seo SAND WITH SILT. Dark greenish gray [10" 411]. 231.5 ft. SM. 114 Seo SAND WITH SILT. Dark greenish gray [10" 411]. 231.5 ft. SM. 115 S	PROJECT Price-	Pfist	er		<u></u> .	PRO	JEC1 MBER	EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-44		
Core is completely desaggregated grantitic rocks. SM 1 S	TIME COLLECTED SAMPLE NAME				ОУМ (ррпіч)	DEPTH (feet)		MATERIAL DESCRIPTION AND DRILL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTI
irregular subthorizontal bedding locally common; dense; slightly moist to dry. 275 SANDY CLAY: Very dark gray [10 YR 3/1]; 30% fine to medium clambding and; interbedded with thin irregular sand beds (0.5-2.0 cm hick); core is rubble; slightly moist. 280 280 100 9.3 280 100 9.3 280 281 285 SAND: Olive gray [57 4/2]; 5% silt; gravel generally is weakly cemented and sandstone; reacts with hydrodina cidi; sand is fine to medium grained; cobbles and rock flour common in core; losse; dry. 283.0-284.0 ft: Core is mostly rock flour. 285 SAND: Olive gray [57 4/2]; 35% fine to medium grained and; cobbles rare but present; indistinct intervals or thin beds of sand visible; core is rubble; dry. 9.8 13 295 295.0 ft: Cored cobble. 11.6 296.0-299.0 ft: Silty sand; dry to very slightly moist. Total Depth of Borehole = 300 feet.	15:00					265 —	CLA clay disto read 265.	e is completely disaggregated granitic ro (YEY SAND; Very dark gray [10YR 3/1]; interbedded with grey sand; 35% clay; to orted; slip planes visible in clay-rich inter- ction with HCI in finer-grained materials; in 0-267.0 ft; Sand; grey; very few fines; in 0-275.0 ft; Core is slightly moist to dry;	very dark grey peds irregular & vals: hard; strong moist. noist to wet. friable; rubble.	SM SC		
4.8 SANDY SILT; Olive gray [5Y 4/2]; 35% fine to medium grained sand; cobbles rare but present; indistinct intervals or thin beds of sand visible; core is rubble; dry. 9.8 295			10		2.1 9.3	280 —	SAN sand thick SAN 10% weal sand com.	iular subhorizontal bedding locally committy moist to dry. (DY CLAY; Very dark gray [10YR 3/1]; 3(1); interbedded with thin irregular sand bed); core is rubble; slightly moist, iD WITH SILT AND GRAVEL; Grayish bedien to medium gravel; 10% silt; gravel (1) kly cemented sandstone; reacts with hyd is fine to medium grained; cobbles and mon in core; loose; dry.	non; dense; 0% fine to medium ds (0.5-2.0 cm rown [10YR 5/2]; generally is trochloric acid;	CL SW-		
11.6 298.0-299.0 ft: Siltly sand; dry to very slightly moist. Total Depth of Borehole = 300 feet.			13		4.8 9.8	290 —	SAN SAN sand of sa	tly moist. DY SILT; Olive gray [5Y 4/2]; 35% fine to cobbles rare but present; indistinct interned visible; core is rubble; dry.	o medium grained	ML		
			145 / J.			305 —	298.0	0-299.0 ft: Silty sand; dry to very slightly	moist.			



	ehole &	We	∌II Co	onstr	uctior	1 Lo	g		<u>_</u>		<u> </u>	1	Inc.
BORE		3500	Paxton	St., Pa	acoima,	CA				BOREHOLE / WELL NAME	PB-45	; 	
DRILLI COMP.		roson	nic, tnc.							PROJECT NAME	Price	Pfister	
DRILLI METHO		onic								PROJECT NUMBER	EKI A	20034.0	03 T2
CONDI CASIN	UCTOR G	N/A					DIAMÉTER (inches)	FROM (feet)	то	DATE STARTED	4/11/05	DATE COMPL	LETED 4/18/
BLANK CASIN		N/A					DIAMETER (inches)	FROM (feet)	TO	BOREHOLE DIAM (inches)	6.0	TOTAL (feet)	DEPTH 300
PERFO CASIN	DRATED G	N/A					DIAMETER (inches)	FROM (feet)	TO	DATUM	MSL; SP	CS Zone	e 7 NAD27
GROU'	т н	igh Pe	ercent 8	Solids I	Bentonit	te Slur	ту	FROM 0.0 (feet)	TO 300	0.0 TOP OF CASING		GROUI SURFA	
SEAL		N/A						FROM (feet)	TO	LOGGED BY	Jeff Shav	v, RG #7	7759
FILTER PACK	?	N/A						FROM (feet)	то	CHECKED BY	Jeff Shav	v, RG #7	7759
		S.A	MPLES	S	<u></u>								
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	ОУМ (рртv)	DEPTH (feet)	MATERIAL	DESCRIPTIO	V AND DR	RILLING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTI
			6.5 5.5		2.1 1.9 5.2 1.9	10 -	moist; 20% fine to green-black sand 2 ft: 1 inch bed of SILTY SAND WIT coarse grained sa subangular to sub coarse but mostly 14 ft: Shattered lit just above fragme 15-16 ft: Color cha 17-27 ft: Poor par	medium rour (possibly wear green-black something in the control of	ided to subthered bio and. Brown (10') to moist; et, 15% sibloose. common; rownish gr	(R 4/3); fine to 15% fine to coarse t; sand is fine to increase in moistur ay [10YR 6/2].	SW-SM		
			8		0.1	30 -	SAND WITH GRA [10YR 5/4], loose, 10% clay; clay for 32.5 ft: Cored thro SILTY SAND WITH	dry to moist; ans hard aggreeuigh cobbles.	20% fine to	o coarse gravel,	SW- SC		



PROJECT De	_		nsuuci	uon		 OJECT		BOREHOLE /			Inc.
NAME Pri	ce-Pfis	ster			NUI	MBER	EKI A20034.03 T2	WELL NAME	PB-45		<u></u>
TIME COLLECTED SAMPLE NAME	SAMPLE TYPE	RECOVERY de l'feet)	 -	OVM (ppmv)	ДЕРТН (feet)		MATERIAL DESCRIPTION AND DRIE	LLING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTI
		10		0.0	40 —	30%	TY SAND WITH GRAVEL; Brown (10YF) fine to medium gravel, 15% sit; loose.	R 5/3]; loose; moist;	SM		
		-		0.0	45	CLA soft; subt to su 46.5 SAN	Y WITH SILT AND SAND; Brown [10Y] moist; 35% silt, 20% fine to medium satisficational parting; trace of fine to medius brounded gravel; moderately soft. ft; Rock flour and cobbles. DWITH GRAVEL; Brown [10YR 4/3]; filed sand; loose; moist; 15% fine to medium satisfications.	ind; weak in grained rounded ine to medium	SW		
		10		0.0	55	of sil 50 ft	t; loose. : Cored cobble. ft: Coarse gravel common.	3			
		9		8.4	60 —	mois grave SANI medi	Y SAND WITH GRAVEL: Brown (10YF) t; medium hard; 35% silt, 15% fine to re el; dense; moderately hard. D WITH GRAVEL: Dark grayish brown um to coarse grained sand; loose; wet; um gravel; sand is medium to coarse; i	nedium subangមុង្គរួ [10YR 4/2]អ/11/2005 20% fine to			
17:00 PB45- 68-71	· 车车车车	11.5		.4	70 -	SILT to we	Y SAND; Yellowish brown [10YR 5/4]; et; 40% silt, 5% fine gravel, traces of cla	īrm to hard; moist y.	SM	, C	
		a	0.	.4	75	SANI sand; locall	D WITH GRAVEL: Brown [10YR 4/3]; ri loose; wet; 5% fine to medium gravel; y.	nedium grained up to 5% silt			
		12.5	2.	.4	55 - - - -	silt, 1: round	(SAND WITH GRAVEL; Brown [10YR 5% fine to coarse gravel, 5% clay; gravel to subrounded. 2) Brown [10YR 4/3]; medium to coarse; wet; 15% medium gravel.	el is generally	SM		



PROJI NAME	ECT Drice			701.0		PRI NU	OJECT MBER	EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-4	5		inc.
		SA	MPLES	}				· · · · · · · · · · · · · · · · · · ·				(1)	
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppniv)	DEPTH (feet)		MATERIAL DESCRIPTION AND DRILL	LING NOTES		USCS CODE	GRAPHIC LOG	WELL CONSTRUCTIO
					2.0	-	SAN	D: Brown [10YR 4/3]; medium to coarse e; wet; 15% medium gravel.	grained sand;	S	SP.		
!			12.5		0.4	95 —							
	PB45-		5.5		1.8	100							
16:30	102-106	字 G · · · · · · · · · · · · · · · · · ·	2		2.3	nos	subr sedii poss SAN	.VEL WITH SAND; Brown [10YR 4/3]; su ounded; loose; wet; 40% medium to coal ment was reworked during hole clean-ou ibly depleted fines; coarse at base of uni D; Brown [10YR 4/3]; loose; wet; 5% fine	rse sand; it which may have it.	· / s	W P		
					0.2	110 —	hard grave with 110 t	el. Y SAND WITH GRAVEL; Brown [10YR 4 to soft; moist to wet; 25% fine to coarse el is rounded to subrounded, intervals en traces of clay. ft: Coarse gravels, ft: Coarse gravels.	gravel, 15% silt;				
			20		1.0	120	hydro with From SILT	ing downward to olive yellow [2.5 Y 6/6]; poarbon ("crude oil") odor at top of intervidepth and with increasing oxidized color; 118-120 ft; Coarse gravels common. Y SAND: Brown [10YR 4/3]; hard to loos silt, 5% fine to coarse gravel; intervals o	rat, decreasing ; dense; massive. se; dry to moist;	1	м	/ /	
	;				0.0	125 —	sand	t: Silt-rich interval, t: Unit becomes dry.	i increased				
						130 —	20%	D WITH GRAVEL; Brown [10YR 4/3]; loc fine to coarse gravet. t: Encountered cobble.	ose; moist to wet;	S	W	·	
		+	10		0.7	135	moist of silt incres sandy 135 f 136 f	Y SAND WITH GRAVEL; Dark grayish b ; 40% silt, 10% fine gravel, micaceous, t and clay are common but irregular; moi ases with depth; weak iron oxide staining y intervals. t: Cobbles common, t: Coarse gravel common (1.5-2-inches of	thin (<1 in) beds sture content g locally on diameter).	s	M		
			10		1.5	140 —	From	137-145 ft: Core is almost completely d	dry; completely				
					5.4	145 —							



2000	enole &	VVC	ell CO	nsuu	icuoi	ı Log		<u> </u>		<u> </u>	1 / 1	inc.
PROJU NAME		e-Pfi	ster			PRO NUI	DJECT MBER	EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-45		
0			AMPLES	Ι.		0				ODE	907	WELL CONSTRUCTION
TIME COLLECTED	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)		MATERIAL DESCRIPTION AND DRIL	LING NOTES	USCS CODE	GRAPHIC LOG	
			5		70.8	150	mois of si incre	TY SAND WITH GRAVEL: Dark grayish st; 40% silt, 10% fine gravel, micaceous, tt and clay are common but irregular; mo eases with depth; weak iron oxide staining dy intervals.	thin (<1 in) beds disture content	SM		
						-	den:	D WITH SILT AND GRAVEL: Brown [10 se; moist to wet; 15% fine to medium gra el is rounded to subrounded.	avel,10% silt;	SW- SM CL		
12:20	P845-	电	8		0.0	155	dry t	DY CLAY WITH SILT; Grayish brown [1 o moist; 40% fine to medium sand, 10% el. D; Yellowish brown [10YR 5/4]; medium	silt, 5% fine	SP		
2.20	154-161	**************************************				160 —	SAN mod grav	se; wet; 5% fine gravel. D WITH SILT AND GRAVEL: Brown [7.3] erately hard; wet; 20% fine to coarse gravel is generally rounded to subrounded; versioning.	avel, 10% silt;	SW- SM		
						165 —						
		!	17		4.0	-	SAN	D; Brown [10YR 4/3]; dense; wet; 5% fir	ne gravel 5% sill	SP		
					4.7	170 —	SILT	Y SAND WITH GRAVEL; Brown [10YR	5/3]; firm to hard;	SM		
						175	wet; subr	20% fine to coarse gravel, 20% slit; grav ounded. D WITH GRAVEL; Brown [10YR 4/3]; sc	vel is rounded to	św		
					3.5		20%	fine gravel, 5% silt.				
					0.2	180		ft: Cored cobbles.			. O.	
						185	SILT hard;	Y <u>SAND WITH GRAVEL</u> ; Brown [10YR moist; 35% silt, 15% fine to coarse grav	5/3]; moderately vel, 5% clay.	SM		
	!		20	į	7.7	-	187.5	ifi: Cobbles.				
		F.			5.5	190		189-190 ft: Sandy interval with very little	e silt.			
17:45	PB45- 191-198	非体验 经收益 医甲甲甲基苯基				195 —	192 f	t: Cored cobbles.				
		厚体度等			1,7		to me	2: Dark yellowish brown [10YR 4/4]; loos dium, rounded to subrounded gravel, w	eak pervasive	SP		
	ļ		8.5		0.0	200	SILT	xide staining, especially at the top of the Y SAND WITH GRAVEL; Brown (10YR 5 moist to wet; 30% silt, 15% fine to medi	5/3); moderately	SM .		



PROJECT NAME	Price-Pf	ister		PR NU	OJECT EKI A20034.03 T2 MBER EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-45		
TIME COLLECTED SAMPLE	Ļ	RECOVERY (feet)	 	OVM (ppmv) DEPTH (feet)	MATERIAL DESCRIPTION AND	DRILLING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTI
		8.5	0	205 -	SILTY SAND WITH GRAVEL: Brown (hard; moist to wet; 30% silt, 15% fine to	10YR 5/3]; moderately o medium gravel.	SM		
		20		210	SAND WITH GRAVEL AND SILT; Brow very soft; moist to wet; 15% fine to coa is more concentrated at basal 1.5 feet; 217.5 ft: Cored boulder; cobbles comm	rse gravel, 10% silt; silt top of unit is wet.	SW- SM		
			0.		SAND WITH GRAVEL AND SILT: Dark [10R 4/1]; loose to soft; moist to wet; 30 gravel, 10% silt.	reddish gray 0% fine to medium	SW- SM		
		13	1.	235 —	SILTY SAND WITH CLAY: Dark greeni to very hard; moist; 20% silt, 10% clay; semi-consolidated. 235 ft: Color change to brown 10YR 4/3 changes back at 238 ft bgs.	locally friable;	SM		
		10	1.	-	SAND; Olive gray [5Y 4/2]; loose to mod 5% silt, 5% fine gravet.		SP		
13:45 PB45 243-25		17	3.9	250 -	SILTY SAND: Olive gray [5Y 5/2]; fine to sand; moderately hard; moist to wet; 20 semi-unconsolidated; weak bedding loc SILTY SAND WITH GRAVEL; Olive grastrong; 30% coarse gravel, 20% silt; qui common; most clasts are friable weather contains clay and silty clay clasts; possippossible rip-up clasts present; yellow iro very common. SILTY SAND; Olive gray [5Y 4/2]; fine to sand; loose to moderately soft; wet; 30% slough reworked by drilling.	% silt; ally visible. y [5Y 5/2]; moist; artzite fragments are ered sandstone; also bie fault gouge and on oxide staining is o medium grained	SM SM CL		
			2.5	5			SM		



PROJE	ECT.			113114	0000	1 Log	DJEC1		BOREHOLE /		1	Inc.
NAME		e-Pfi	ster				MBER		WELL NAME	PB-45	·-	
TIME	SAMPLE NAME	SAMPLE TYPE O	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)		MATERIAL DESCRIPTION AND DRILL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTIO
			17		2.5	260 —	moi com (2 m pos san	NDY CLAY WITH SILT; Very dark gray [1 st; 30% fine sand, 20% silt; weak irregulation; also commonly interbedded with in m-2 in); sand is mostly white; interbeds silter ortation; rare zones of moderate irold beds. TY SAND: Olive gray [5Y 4/2]; fine to meeting sand sand sand sand sand sand sand sand	ar bedding is regular thin lense are chaotic; n oxide staining in	CL		
		+			2.6	265 —	sand grey SAN part to st inter	d; soft; moist to wet; chaotic unit; has rand. D; White [10YR 8/1]; medium grained satially consolidated, especially in localized trong from oxide staining locally; rubble arthods of silty sand.	e zones of dark and; moist to wet; zones; moderate nd and rare	SP- SM		
			7		3.0	270 —	mois com lens subt mica	IDY CLAY WITH SILT; Very dark gray [1 st; 30% fine sand, 20% silt; thin, slightly filmonly distorted, and is interbedded with es; rare weak slickensides on bedding plantizontal to steeply dipping locally; almosteous locally. ID WITH SILT; Gray [10YR 6/1]; fine to not seen the same state of the same	issile bedding is white sand lanes; bedding is est shale;	CL		
			5		1.5	275	parti 271 SAN fine	ing varies sell; Gray [1014 or]; late to the distribution of the	subhorizontal ce clay. 0YR 3/1]; 30% terbeds of	SP- SM		
			12		0.0	285 —	SAN abov CLA loca	ured. ID WITH SILT; Gray [10YR 6/1]; slightly ove (264.5-273 ft bgs). Y WITH SILT; Very dark gray [10YR 3/1] Ily with very thin laminae of gray sand (~ colidated than above units.); dry; 20% silt;			
					3.3	290	gray	ISOLIDATED CLAY WITH SAND (SHAL [10YR 3/1]; dry; 25% fine sand; micaced es; lithified.	E): Very dark ous on bedding	CL		
12:40	PB45- 293-300	中原 市 中北 宋 南 市 市 市 年 市 本	6		3.5	295 -	SAN Soft: CON Gray bedd	ISOLIDATED SAND (SANDSTONE); Lig R 7/1]; hard; completely lithified; bedded D; Dark gray [10YR 4/1]; fine to medium wet; 5% silt. ISOLIDATED SAND WITH MINOR CLAY ish brown [10YR 5/2]; dry; weak; irregula ling with minor amounts of shale; weakly covite and biotite oriented parallel beddin	grained sand; Y (SANDSTONE); or chaotic foliated;	SP SP- SC		
		[±]				305 -		Depth of Borehole = 300 feet.	75			
						1 F.						



	HOLE 13	500 P	axton S	St., Pad	coima,	CA					BOREHOLE / WELL NAME	PB-46	i		
DRILI COMI		osonic	c, Inc.	·						···-	PROJECT NAME	Price	Pfiste	Γ	
DRILL METH		nic	•					- "			PROJECT NUMBER	EKI A	20034.	03 T2	
CONI CASII	DUCTOR VG	N/A			_		DIAMETER (inches)	FROM (feet)	то		DATE STARTED	/18/05	DATE COMP	LETED '	4/21/05
BLAN CASII		N/A					DIAMETER (inches)	FROM (feet)	то		BOREHOLE DIAM (inches)	6.0	TOTAL (feet)	DEPTH	307
PERF CASII		N/A		·			DIAMETER inches)	FROM (feet)	то		DATUM N	MSL; SP	CS Zon	e 7 NAD2	27
GRO	<i>JT</i> Hig	h Per	cent So	olids B	entonit	e Sluri	y	FROM 0.0	то	307.0	TOP OF CASING	-	GROU SURFA		1042.66
SEAL		N/A						FROM (feet)	то		LOGGED BY	leff Shav	v, RG#	7759	· · · · · ·
FILTE PACK		N/A	. = . =					FROM	TO		CHECKED BY	leff Show	50.4	7750	
REMA		M read	dings st	nown ar	re unrei	liable d	ue to extreme heat	(feet) of the core pro	duced	l by soni			w, RG # 		
REMA			dings sh	nown ar	re unrei	liable d	ue to extreme heat		duced	l by son		ell Silai			
TIME		SAM		BLOW COUNT	re unrei	DEPTH (feet) ald					c drilling.	USCS CODE	GRAPHIC LOG	CONSTR	

	7	1,3	5 —	CONCRETE SAND WITH GRAVEL: Dark grayish brown [10YR 4/2]; fine to medium grained sand; dense; soft; moist to wet; 10% fine gravel; clasts are subrounded to rounded; possibly fill material. SAND WITH GRAVEL; Brown [10YR 5/3]; medium to coarse grained sand; loose; slightly moist; 15% medium to coarse gravel. From 3-5.5 ft: Cobbles up to 4-inches diameter common.	SP O	
5.GDT 8430/05	7	1.0	10 —	From 8-11 ft: Cobbles up to 5-inches diameter common. SILTY SAND WITH GRAVEL: Dark yellowish brown [10YR 4/4]; loose; moist to slightly moist; 15% slit; 25% fine to coarse gravel; cobbles up to 3 inches diameter visible but rare. At 14 ft: Rock flour and shattered lithic fragments (boulder). At 17 ft: Rockflour and shattered lithic fragments (boulder).	SM	
EKISTO - BH AND MW LOG PPF-DEEP-WELLS.GPJ EKIF VS.GDT 8/30/05	10	8.1	20 -	At 17 It. Househous and strategies halle fragities as (bouldes).		
1-EKI STD - BH AND MW LO	10	3.7	30	SAND WITH GRAVEL AND SILT: Yellowish brown [10YR 5/6]; loose; moist to slightly moist; 20% fine to medium gravel. 10% silt, 5% clay. From 32-35 ft: Increasing clay content. From 33-35 ft: Cobbles >4-inches diameter common.	SW- SM	



PROJE NAME	FCT Pric	e-Pfis	ter	<u> </u>	. 		DJECT EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-46		
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)	MATERIAL DESCRIPTION AN	ID DRILLING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTI
			10		0.0	-	SAND WITH GRAVEL AND SILT; Y loose; moist to slightly moist; 20% fit silt, 5% clay.	ellowish brown [10YR 5/6] ne to medium gravel, 10%	SW- SM		
			7		0.6	40 -	At 41 ft: Cobbles up to 3-inches com SAND WITH GRAVEL AND SILT; D. [10YR 4/4]; fine to coarse grained sa	ark yellowish brown	SW- SM		
					1.6	45 —	slightly moist; 15% fine to medium gr locally variable; intervals of predomin sand are common.	ravel, 10% sitt; sitt content			
					9.4	55	SAND: Brown [10YR 4/3]; medium g moist; 5% fine gravel, less than 5% s SILTY SAND WITH GRAVEL: Grayts loose; moist to slightly moist; 30% fir sitt.	silt. sh brown [10YR 5/2];	SP / SM		
					8.1	60 -	From 56-57 ft: Cobbles and rock flou SAND WITH GRAVEL; Dark grayish moist to very moist; 20% fine to med angular to subrounded.	brown [10YR 4/2]; loose; ium gravel; clasts are	sw		
11:10	PB46- 66-67	***		:	53.6	65	At 62 ft: Core is wet. SILTY SAND WITH GRAVEL: Dark y [10YR 4/4]; soft to moderately hard; silt, 5 % clay.		SM		
					28.9	70 -	SAND: Brown [10YR 4/3]; medium gr 5% fine gravel. At 70 ft: 1-inch interval of magnetite SILTY SAND; Dark yellowish brown [medium grained sand; moderately so	sand. [10YR 3/4]; fine to	SP SM		
			15		11.1	75	At 74.5-75.5 ft: Sandy interval with ve	ery little silt.			
			0		7.7	85	SAND; Dark brown [10YR 3/3]; media wet; 5% medium to coarse gravel; me	um grained sand; loose; agnetite common.	SP		
			10		13.1	90					



			···	11300	101101	<u>1 Log</u>						I Inc.
PROJE NAME	ECT Price	-Pfis	ter				OJECT MBER	EKI A20034,03 T2	BOREHOLE / WELL NAME	PB-46		<u>,</u>
		\$A	MPLES	\$							· m	
COLLECTED	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)		MATERIAL DESCRIPTION AND DRILL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTI
					4.2	-		D: Dark brown [10YR 3/3]; medium grain 5% medium to coarse gravel; magnetite		SP		
			10		1.7	95 —						
		4 4 4 4 4	9		1.9	100 —						
13:20	PB46- 100-107				3.4	105 —	<u>SAN</u> [10Y	<u>D WITH GRAVEL AND SILT;</u> Dark grayi R 4/2]; loose; wet; 25% fine to coarse gr	ish brown ravel, 10% silt.	SW SM		
						110 —		77 ft: Cobbles common.				
					0.2	115 —	<u>SAN</u> grain	D WITH GRAVEL; Brown [10YR 4/3]; m led sand; rounded to subrounded; loose; se gravel; cobbles common.	edium to coarse; wet; 20% fine to	SW	, 0	
			17.5		0.0	120 —	SAN sand	D; Dark brown [10YR 3/3]; medium to co ; loose; wet; 5% fine to medium gravel.	parse grained	SP	, O	
					0.0	-						
		+			0.9	125 —	At 12	6 ft: Very large cobble.				
					0.0	130 —						
	3		13			135 —	SANO fine to	D WITH GRAVEL; Brown [10YR 4/3]; loc o coarse gravel, 5% silt.	ose; wet; 15%	sw	0.00	
					4.2	140		8 ft: Cobbles common over a 1-foot inter		012		
			7		0.0	-{ {} {} {	medit to me SANI mode	/ SAND; Dark yellowish brown [10YR 4// um grained sand; moderately soft; wet; 2 dium gravel. DWITH GRAVEL AND SILT; Brown [10Y rately hard to loose; wet; 20% fine to co	20% silt; 10% fine YR 4/3];	SM SW- SM		
					2.5	145 —	Subro	unded to subangular gravel, 10% silt.				



PROJE NAME				110114	Clion		DJECT EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-46	<u> </u>	inc.
- 4		s/	MPLES	;		1,401		-7	}		
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)	MATERIAL DESCRIPTION AND DRI	LLING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTI
08:55	PB46-	- 李章李章章	10		11.8	150 —	SAND WITH GRAVEL AND SILT: Brown [moderately hard to loose; wet; 20% fine to subrounded to subangular gravel, 10% silt	coarse,	SW- SM		
,	150-157				0.5	155	SAND; Dark yellowish brown [10YR 4/6]; Io to medium gravel, 10% silt.		SP		
						160	CLAYEY SAND; Brown [7.5YR 4/3]; fine to sand; moderately hard; moist; 20% clay.		Sc		
					5.3	165 —	CLAYEY SAND WITH GRAVEL: Brown [10 coarse grained sand; angular to subangular moist to wet; 40% gravel, 20% clay; appea disaggregated highly weathered granitic rosame material.	r; hard to loose; rs to be mostly	sc		
			18.5		11.9	170 —	SANDY CLAY: Dark yellowish brown [10YF to wet; 30% fine to coarse sand; 10% fine of staining around highly weathered clasts of common.	ravel, iron-oxide	CL		
					2.9	175 —	SILTY SAND; Olive gray [SY 5/2]; fine grain 30% silt; chaotic interbeds of iron-oxide state common; beds possibly distorted from drilling.	ined sand is locally	SM		
		+			0.0	180 —					
						-	Core is mixed over the next 17 feet; core re only; appears to be a pale olive (5Y 6/3) ma silt from 180-197 feet.				
			10			185					
						190					
					2.1	195 —	SAND Pate dive (EV 8/2): For to median	roined condi			
15:05	PB46- 200-207	海 事 早 平	10		0.3	200	SAND: Pate ofive [5Y 6/3]; fine to medium g dense; wet; subhorizontal bands with iron-o common; locally strong. At 198 ft: 4-inch clay interval. SAND: Ofive [5Y 5/3]; fine to medium grains massive; rare 5 mm blebs of iron-oxide stall	xide staining is	SP		



PROJECT Price	e-Pfis	ster		on Log PRI NU	OJECT MBER	EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-46		
	S.A	SAMPLES						-		
TIME COLLECTED SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	DEPTH (feet)		MATERIAL DESCRIPTION AND DRIL	LING NOTES	nscs code	GRAPHIC LOG	WELL CONSTRUCT
15:05 PB46- 200-207	*****	10	0.	205 -	mas inter At 2 with At 2	ID: Olive [5Y 5/3]; fine to medium graine sive; rare 5 mm blebs of iron-oxide stair isity. 05 ft: 6-inch zone of moderate iron-oxide clay interbeds (5-15 mm thick). 77 ft: Local moderately intense iron-oxide iciated with thin clay intervals.	ning visible; low e staining; occurs	SP SP		
					SAN	D: Dark reddish brown [5YR 3/3]; fine to ; dense; wet; massive; pervasive intens ing throughout.				
	20 4.1		215 —		12 ft: Subhorizontal, pseudo-planar bleb I 1-2 mm thick,	s of unoxidized				
				Fron (10Y	n 212-220 ft: Gradual color change to ye R 5/8); pervasive intense iron-oxide sta	ellow brown ining throughout.				
			0.5	220 — 5 —						
			0.0	225 —		202-229 ft: Gradual lightening of color n (2.5Y 5/6).	to light olive			
				230 —						
			6.7	235 —						
		18.5	0.0	-	mode thin it	(EY SAND WITH SILT, Yellowish brown erately hard; moist; 10% silt, 15% clay, on terbeds (2-20 mm); iron-oxide and mag	clay is common in gnesium oxide	sc		
	240 -		bedd SANI	ng common; sand shows irregular subhing. 2; Light olive brown [2.5Y 5/4]; fine grain 5% clay; massive.		SP				
			2.5	245 -	magn At 24	5 ft: Sand has irregular bedding; iron-ox esium-oxide staining on local bedding p 6.5 ft: 6-inch interval of black sandy cla	olanes. v.	_/ SP		
				250 —	sand;	2; Yellowish brown [10YR 5/6]; fine to m soft; wet; massive.				
0:00 PB46- 251-258	***	10	0.0	255 —	fine to sand has w predo	EY SAND: Light gray [N7] with dark gray medium grained sand; moderately har (light gray) interbedded with sandy clay reak irregular bedding with rare slickens minant orientation; very weakly consoli	d to hard; moist; (dark gray); clay sides; no	sc		
207-230	甲毒 等 等 等 等		1.0		shale At 25 sand.	and sandstone. 5 ft: 6-inch interval of dark yellow brown 2; Gray [N5]; fine to medium grained sal	(10YR 4/4)	_/ SP		



DDO ICOZ	Price-Pf		011011	101.01	I LOG	DJECT MBER	EKI A20034.0	13 T2	BOREHOLE /	PB-46	1	I Inc.
NAME		SAMPLI			NUI	MBER 	ENI A20034.1		WELL NAME	F D-40		
TIME COLLECTED SAMPLE NAME	 				DEPTH (feet)		MATERIAL DESC	CRIPTION AND DRIL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTI
				15.5	265 -	SAN hom	<u>D;</u> Gray [N5], fine i ogeneous.	to medium grained s	and; wet; massive;	SP		
				0.0	270 — 270 — 275 —	A1 26	8 ft: 1-foot interval	l of medium to coars	e sand.			
				0.2	280 —							
		19		0.7	290 -		1 ft: 4-inch interval		R 4/1): dense hard	SC	//2	
PB46- 299- 306, 15:15 BB46		10	,	0.0	300	SANI mass	2; Gray [N5]; fine to ive; homogeneous	N5], Dark gray (10YF; 30% clay with silt; is orizontal bedding (2-to medium grained section).	and; dense; wet;	SP		
PB46- 299- 306D	李章事可先生	0		0.0	305 -	Total	Depth of Borehole	= 307 feet.				
					- - -							

1-EKI STO - BH AND MW LOG PPF-DEEP-WELLS.GPJ EKIF V5:GDT 8/30/05

Bor	ehole &	We	ell Co	nstr	uctio.	n Lo	<u>g</u>						– Kalinowski Inc.
	HOLE 13	500	Paxton	St., Pa	acoima	, CA				BOREHOLE / WELL NAME	PB-47		
DRIL. COM	JNG PANY Pri	oson	ic, Inc.							PROJECT NAME	Price-	Pfister	
DRIL. METH		nic								PROJECT NUMBER	EKI A	20034.0)3 T2
CONI CASI	DUCTOR NG	N/A					DIAMETER (inches)	FROM (feet)	то	DATE STARTED	3/29/05	DATE COMPL	ETED 4/4/05
BLAN CASII		N/A		-	•		DIAMETER (inches)	FROM (feet)	то	BOREHOLE DIAM (inches)	6.0	TOTAL (feet)	DEPTH 297
PERF CASII		N/A					DIAMETER (inches)	FROM (feet)	TO	DATUM	MSL; SPCS Zone 7 NAD27		
RO	<i>JT</i> Hig	jh Pe	ercent S	Solids E	3entoni	ite Slu	ry FROM 0.0 TO 297.0 TOP OF CASING				,	VD CE 1039.4	
EAL	·	N/A						LOGGED BY	Jeff Shav	v, RG #7	7759		
ILTE ACK	R	N/A				•		FROM (feet)	TO	CHECKED BY	Jeff Shav	v, RG #7	7759
	RKS OV	WI I E	aciiiga a		10 une	sing Die	due to extreme heat	or the core proc	uced by a	ome diming.	·		
		SA	MPLES	: 		-1					ևո	၂ ဗွ	WELL
COLLECTED	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)	MATERIAL	. DESCRIPTION	I AND DR	ILLING NOTES	USCS CODE	GRAPHICLOG	CONSTRUCTIO
		П	0				ASPHALT SILTY SAND W	TH GRAVEL: B	rown (10Y	R 4/3]; rounded to	- SM		
		+	2.5		1.1		- subangular; loos	e; moist; 25% fi	ne to med	ium gravel, 15% sil	t.		
					1.8	5 -	- -						
		+	3		1.1 2.9 5.1		At 6 ft: Rock flou	r; angular fragm	ents; shat	tered cobbles.			
			7		2.2	10 -	1	Ů.	•	/2) silt with sand.			
					1.8		30% fine to coar	se sand, 5% fine	to mediu		ML		
ļ			1		1,1		SILTY SAND WI coarse grained s 15% silt; gravel i	and; loose; moi	st; 15% fin	e to medium grave	1, SM		
			4.5		1.8	15 -	_ cobbles at 13.0-1		to light a	ray hrown			
		†	Ì		1.3		(10YR 5/2).	•		ited silt with clay			
					5.5	20 -	and sand. At 19 ft: Cobbles	and rock flour o	ver a 6-in	ch interval; color			
			10.5		0.7		change to light b At 21 ft: 4-inch co			our.			
					1.6	25 -]				!		
					1.0	25	_						
		1 T	1	Ì	0.0	l	1					HHH	コノノノス
			į	Î	0.0		-						
			9.5		3.6	30 -	SILTY SAND WI				SM		



	vveli Constru			BOOK!!OLE /			inc.
PROJECT Price	-Pfister		PROJECT EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-47	, —— <u> </u>	
	SAMPLES				8	90	WELL
TIME COLLECTED SAMPLE NAME	SAMPLE TYPE RECOVERY (feet) BLOW COUNT	OVM (ppmv)	MATERIAL DESCRIPTION AND	D DRILLING NOTES	uscs code	GRAPHIC LOG	CONSTRUCTIC
	9.5	1.4	SILTY SAND WITH GRAVEL: Light y [10YR 6/4]; loose; moist; 10% fine to At 35 ft: Cobbles up to 3-inches in dia	medium gravel, 20% silt.	SM		
	10	1.1 45	From 43-44 ft: Fine rock flour; shatter weathered granitic rocks. At 44 ft: Color change to brown (10Y)	-			
	8	50		ım gravel, 35% silt;	SM		
	4	55	At 52 ft: Cobbles up to 3-inches in dia SILTY SAND; Brown [10YR 4/3]; toos 10% fine to medium gravel, gravel classifications and subrounded.	se; dry to moist; 15% silt;	SM		
	5.5	0.8					
	5.5	65	From 62-65 ft: Cored boulder; rock flocommon; varies between weathered and granodiorite.				
	8	0.7	At 68 ft: Increasing moisture (moist to	3/29/05-	Z .		
		75	At 75 ft: 4-inch thick layer of silt with s minor clay interval. SAND: Brown [10YR 4/3]; fine to coar wet; rare cobbies up to 4-inches in dia	and; very moist to wet;	/ SP		
	12	1.3	- - - -				
	+	1.8	SILTY SAND; Brown [10YR 4/3]; very sand; wet; 15% silt; trace of fine grave semiconsolidated in some intervals.	fine to fine grained et, micaceous;	SM		
12:29	10	90	1			• • •	



PROJE NAME	ECT -			15(140		PRC	DJECT EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-47		inc.
		S.A	MPLES							<u></u>	
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)	MATERIAL DESCRIPTION AND DRILL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTIO
12:29	PB47- 90-95, PB47- 90-95D		10		0.4	5 7	SAND; Brown [10YR 4/3]; loose; moist; fining sequence from 92-88 feet; medium to coarse fine to medium grained at top; biotite and ma common—gives peppered appearance. SAND WITH GRAVEL AND SILT; Brown [10 moderately hard to loose; wet; 10% fine to m 10% silt; some zones richer in silt and weakly cobbles at top of unit.	e grained at base agnetite grains are OYR 4/3]; nedium gravel.			
			10		1.2	1					
					0.8	- - -					
			10).5 		At 11 ft: 1-2 foot interval of mafic sand—most possibly some biotite. SAND; Brown [10YR 4/3]; medium to coarse loose; wet; 5% fine to medium gravel; some imafic minerals ("peppered").	grained sand;	SP		
			9	2	120	, – ,	At 117 ft: Dense interval of fine sand; massiv SAND WITH GRAVEL AND SILT; Brown [10 loose; wet, 35% fine to coarse gravel, 10% stare subangular to rounded.	YR 5/3]; dense to	SW- SM		
				o	125	- - - - -	SAND; Brown [10YR 4/3]; medium to coarse loose; wet	grained sand;	SP		
			10	1	.1	-	SAND WITH GRAVEL, Brown [10YR 5/3]; de moderately hard; wet; 20% fine to coarse gra	ense to Ivel, 5% silt.	sw	þ, Ó, Ó,	
		+			140	1 1 1 1 1	As above; milled boulder fragments at 137-13 through one or more boulders.	39 feet bgs; cored	5		
17:52	PB47- 144-150		13	3	145	1 1 1 1 1 1					



		**	<i>511</i> OO	nşu u	Cijui	n Log					1	inc.
PROJE NAME		-Pfi	ster				OJECT MBER	EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-47	<u>,</u>	
		S	AMPLES	;							1	
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)		MATERIAL DESCRIPTION AND DRIL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTI
17:52	PB47- 144-150	· · · · · · · · · · · · · · · · · · ·	13		0.7	150	mod	ID WITH GRAVEL; Brown [10YR 5/3]; deletely hard; wet; 20% fine to coarse grad to the coar	avel, 5% silt.	SW	, 0	
					0.8	-					. O.	
			7.5		2.2	155 —						
					1.7	160 -	<u>SILT</u> 15%	Y SAND WITH GRAVEL; Brown [10YR fine to coarse gravel, 25% silt.	4/3]; hard; wet;	SM	,,	
					1,1	165 —	incre	66 ft: Cored through boulders; rock flour easing silt and clay content for 1 foot beli change to greenish gray (10Y 5/1).				
9:20			8.5		19.1 107 4.0 7.3	170 —	fragr belov (10Y	pletely composed of rock flour and gran nents at 170 feet bgs; increasing silt and w rock flour (about 1 foot); color is greer 5/1). OVM reading possibly due to very hot o	d clay content nish gray			
		+			1.7	175	SAN wet; rocks	D WITH GRAVEL, Brown [10YR 4/3]; de 20% fine to coarse gravel; chiefly decon	ense to loose; nposed granitic	SW	000	
			12	į	1.3	180 —		3 ft: Mafic mineral rich layer (biotite and hes thick.	magnetite) about		0.00	
				ļ	1.8	185 —	At 18	6 ft: Cored through boulders of weather tic rocks.	ed, decomposing			
			11		2.2	190 -	mode <u>micae</u> <u>SILT</u>	Y SAND WITH CLAY; Grayish brown [10] rrately hard; wet; 40% sllt, 15% clay; ser beous. Y SAND WITH GRAVEL; Brown [10YR of um gravel, 15% silt, traces of clay; mican	miconsolidated; 4/3]; 25% fine to	SM		
4:06	P847- 194-201	· 中年年本年 中年			2.0	195	weath SANG	7 ft: Core is semiconsolidated; hard; mo tered granitic rocks and silt. 2: Brown [10YR 5/3]; fine to coarse grain	ned sand;	_/ SP		
		*	3		3.8	200	mode	rately hard yet friable; moist; 5% mediu 1, 5% silt.	m to coarse			
5:30			10.5	1	5.6	' 1				ļ		

1-EKI STO - BH AND MWLOG PPF-DEEP-WELLS GPJ EKIF VS GDT 8/30/05



	enole &	770	<i>III</i> 00	nouu	CHOI	1 LOG					inc.
PROJ NAME		-Pfis	ter			PRO NUM	OJECT MBER EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-47		
		SA	AMPLES	3							
TIME	SAMPLE	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)	MATERIAL DESCRIPTION AND DRIL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTION
						205 —	SANDY CLAY; Brown [7.5YR 5/4]; fine to medius sand; hard; slightly moist; 10% fine to medium grait. At 206 ft: Higher gravel content; core rubbliz	im subrounded to ned sand.	CL		
15:30			10.5		0.8	210 —	CLAYEY SAND WITH GRAVEL; Brown [10] moderately hard; moist; 20% medium to coa clay; fine detrital muscovite common; weak sirregular bedding with alignment of micaceouirregular bedding; semiconsolidated.	(R 4/3]; rse gravel, 20% subhorizontal	SC		
			10		1.9	215 -	SiLTY SAND WITH GRAVEL: Dark yellowist [10YR 4/4]; moderately hard to loose; wet; 1 gravel, 15% silt; weakly consolidated; rare in decomposed granitic rocks; friable. At 218 ft: 3-inch thick sandy clay interval.	5% fine to coarse	SM		
		- - 			1.9		At 222 fl: Large cobble; milled.				
16:40			14.5		7.7	225 —					
					9.2	230 —					
					1.9	235	SAND; Yellowish brown [10YR 5/6]; moderat friable; wet; 10% silt; fine-grained; weakly comoderately pervasive iron-oxide staining; maSILTY SAND; Yellowish brown [10YR 5/8]; th silt; weakly consolidated; micaceous; modera strong iron-oxide staining in liessegang-type with local slickensides in manganese-oxide from the staining in the	nsolidated; ssive. sinly bedded; 15% ately strong to bands; distorted racture coatings;	SP- SM SM		
07:45		■ · · · · · · · · · · · · · · · · · · ·	9.5		10.9	240	subhorizontal to moderately dipping foliation- minerals. CLAY WITH SAND INTERBEDS; Very dark of [10YR 3/2] and Gray [10YR 6/1]; moist to slig interbeds are contorted, irregular; subhorizon with manganese-oxide and slickensides com- zones of iron-oxide staining.	grayish brown htly moist; ital slip planes	CL		
13:10	PB47- 243-250	· · · · · · · · · · · · · · · · · · ·	3		0.5	7 -					
08:55			3		0.0	250	CLAYEY SAND WITH SILT; Dark gray [10YR moist; 10% silt. 25% clay; possibly interbedde rubblized; clay fragments fractured with disco of sand.	ed but completely	sc		
		+	7		0.0	255					



		. ,,,	<i>11</i> CC	11500	CHOI	Log					1	Inc.
PROJE NAME	FC ^T Pric	ce-Pfis	ter			PRO NUM	JECT IBER	EKI A20034.03 T2	BOREHOLE WELL NAME	[/] РВ-47		
		SA	MPLES	3			·	-			(5)	
COLLECTED	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)		MATERIAL DESCRIPTION AND DRILLING NOTES		USCS CODE	GRAPHIC LOG	WELL CONSTRUCTI
	PB47-		7		0.0	260 —	soft;	Y WITH SAND AND GRAVEL; \ moist to wet; 5% fine to medium se sand: crude oil odor.	Very dark gray (10YR 3 n gravel, 10% medium	/1); CL		
15:30	263- 263.5 PB47- 292.5- 293		6		0.1	265	SAND; Light brownish gray [10YR 6/2]; fine grained sand; loose; dry to moist; chiefly quartz; loose; reaction with HCl.		SP			
					0.0		CLAY WITH SAND: Black [10YR 2/1]; soft; moist; 5% gravel, 15% medium to coarse-grained sand; gravel is subangular to subrounded; crude oil odor; reaction with HCt.	to CL				
					0.0	270 - - - - 275	subh comp on fr At 27	SILTY CLAY: Very dark gray (10YR 3/1); hard; dry to moi 5% fine to coarse sand, 30% silt; micaceous; weak subhorizontal bedding and laminations; semiconsolidated completely rubblized in core; weak petroleum odor notice on fresh faces when broken; almost shale; reaction with hat 274 ft: 1-inch thick bed of gray (10YR 6/1) sand; fine-grained and micaceous. At 277 ft: 2-3-inch bed of gray, fine-grained sand.	ns; semiconsolidated; etroleum odor noticeat shale; reaction with HC	le		
		 - 			8.0	280 —						
					0.2	285 —						
		+			1.0							
		+			24.1 129	290 —		of ft: 0.7 foot interval of gray fine		nd.		
						295						
			ļ			300 -	Total	Depth of Borehole = 297 feet.				
						<u></u>						
						305						
						310						
						-						
			<u> </u>			7					į į	



BOREHOLE LOCATION	13500 Paxton St., Pacoima,	CA			BOREHOLE / WELL NAME	PB-48	3		
DRILLING COMPANY	Prosonic, Inc.	·			PROJECT NAME	Price	Pfister		
DRILLING METHOD	Sonic				PROJECT NUMBER	EKI A	20034.03 T2		
CONDUCTOR CASING	N/A	DIAMETER (inches)	FROM (feet)	TO	DATE STARTED	5/23/05	DATE COMPLETED 5/26/05		
BLANK CASING	N/A	DIAMETER (inches)	FROM (feet)	то	BOREHOLE DIAM (inches)	6.0	TOTAL DEPTH 301		
PERFORATED CASING	N/A	DIAMETER (inches)	FROM (feet)	TO	DATUM	MSL; SP	CS Zone 7 NAD27		
GROUT	High Percent Solids Bentonite	Slurry	FROM 0.0 (feet)	⁷⁰ 301.0	TOP OF CASING		GROUND SURFACE 1032.59		
SEAL	N/A		FROM (feet)	TO	LOGGED BY	David O'	Connor		
FILTER PACK	N/A		FROM (feet)	TO	CHECKED BY	Jeff Shaw, RG #7759			

			SA	MPLES						"	
	TIME COLLECTED	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)	MATERIAL DESCRIPTION AND DRILLING NOTES	uscs copE	GRAPHIC LOG	WELL CONSTRUCTION
-EKISTD - BH AND MWLOG PPF-DEEP-WELLS GPJ EKIF V5.GDT 6/30/05	0		75	7 3.5 6	B(0.0 0.0 0.0 0.0 1.7 0.0 3.7 6.9 1.2 0.1 0.0 2.1	5 - 10 - 15 - 20 - 1	SAND WITH GRAVEL; Dark brown [10YR 3/3]; dry to moist; 15% subangular to subrounded, fine to coarse gravel; 5% silt; fine to coarse sand. SILTY SAND WITH GRAVEL; Very dark grayish brown [10YR 3/2]; dry to moist; 20% subangular to subrounded fine to coarse gravel (up to 6-inches long axis); 15% silt. At 13.0 ft: Approximately 1-foot of rock flour, light yellowish brown (2.5Y 6/3). At 14.5 ft: Color change to olive brown (2.5Y 4/4). SAND WITH GRAVEL AND SILT; Dark brown [10YR 3/3]; dry to moist; 30% subangular to subrounded gravel (75% fine, 25% coarse); 10% silt; rock flour common; some semi-lithified conglomerate-like clasts; majority of gravel is marble sized. At 26.0 ft: Approximately 6-inch sand lens of black, medium grained clean sand (10YR 2/1); slight micaceous luster.	SW-SM		
1-EKI STD - BH AND MW.L				2			30 -				

1-EKLSTD - BH AND MW LOG PPF-DEEP-WELLS GPJ EKIF V5 GDT 8/30/05



		vve	II COI	nstructio	п Log	<u> </u>		<u>~</u>		inc.
PROJ. NAME		-Pfis	ter		PR NU	ROJECT EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-48		
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT OVM (ppmv)	DEPTH (feet)	MATERIAL DESCRIPTION AND DRIL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTION
			2	0.0	-	SAND WITH GRAVEL AND SILT; Dark brow to moist; 30% subangular to subrounded gra 25% coarse); 10% silt; rock flour common; s conglomerate-like clasts; majority of gravel is	ivel (75% fine, ome semi-lithified s marble sized.	SW- SM		
			10	0.0	-	SAND WITH SILT: Dark yellowish brown [10] moist; 10% silt; sand (40,40,20); trace of fine SILTY SAND WITH GRAVEL; Brown [10YR silt; 20% gravet; rock flour common; gravel is subangular (60% fine, 40% coarse).	gravel. 4/3]; moist; 15%	SP- SM		
				2.1 0.0 0.0	_	SILTY SAND WITH GRAVEL; Dark yellowist [10YR 3/6]; moist; 20% silt; 10% subangular fine gravel; rare coarse gravel; sand is fine to	to subrounded	SM		
		*****	10.5	0.0	-	At 51.0 ft: Color change to brown (10YR 4/3 GRAVEL WITH SAND AND SILT: Brown [10 moist; 35% fine to coarse sand; 10% silt; grato subangular.	YR 4/3]; dry to	GW- GM		
14:15	PB48- 53-67	* 电影用电影 电电影		0.0	60 —	SAND WITH SILT: Dark brown [10YR 3/3]; v fine, subangular to subrounded gravel; sand grained.	vet; 10% sitt;3/ 0% s is mainly medium	Y SP- SM		
!		· · · · · · · · · · · · · · · · · · ·	9	0.0	65	At 64.0 ft: Increase in gravel content to 20% common; sand grades to more fine.	; rock flour			
			9	0.0	70 —					
		• 		0.0	75 -					
			10	0.0	80 —					
				0.3	85 —	SAND WITH SILT: Very dark grayish brown to wet; 10% silt; trace of fine gravet; homoger	10YR 3/2]; moist nous.	SP- SM		
			1		90 -					



PROJE NAME	Price	e-Pfis	iter			PRO NUI	DJECT EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-48		<u></u>
		S/	MPLES	: . 					14.	9	14651
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)	MATERIAL DESCRIPTION AND DRILL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTI
17:15	PB48- 93-100, PB48- 93- 100D	· · · · · · · · · · · · · · · · · · ·	1		0.0 0.0 0.0	95	SAND WITH SILT; Very dark grayish brown to wet; 10% silt; trace of fine gravel; homoge From 93.0-98.0 ft: Sand coarsens (30,40,40 From 98-100 ft: Varying sand grain sizes from grain to mostly medium to coarse.	nous.).	SP- SM		
			18		0.0 0.0 0.0 0.0	105 —	From 110-112 ft: 20% gravet.				
					0.0	115 —	SAND WITH GRAVEL AND SILT; Brown [10] 15% subrounded to subangular gravel; 10% sand.	YR 4/3]; moist; silt; fine to coarse	SW- SM		
			22		1.4 0.0 7.1	125 —	SILTY SAND WITH GRAVEL: Brown [10YR 6 silt; 20% subrounded to subangular fine grave gravel; slight micaceous luster; trace clay.	5/3]; moist; 40% el; trace coarse	SM		
	į				2.7	135 —	From 135-137 ft: Cobbles. SILT WITH GRAVEL AND CLAY, Very dark gmoist; 20% subrounded to subangular fine grant 10% fine to coarse sand; soft; slightly sticky.	jray [10YR 3/1]; avel; 15% clay;	ML		
			14		0.0	145	SAND WITH SILT AND GRAVEL: Yellowish be moist; 10% silt; 10% fine subrounded gravel; exidized intervals; sand (40,40,20); micaceou homogenous.	some highly	SW- SM		





PROJE NAME				,		PRO NUI	OJECT MBER	EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-48		inc.
		SA	MPLES					<u> </u>				
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)		MATERIAL DESCRIPTION AND DRIL	LLING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTION
			24	ï	0.1	205 —	[10Y	TY SAND WITH GRAVEL, Dark yellowis (R 3/4); dry to moist; 30% silt; 20% fine rounded to subangular gravel; rock floui	to coarse,	SM		
		-	2		1.3	210 —	gran flour SAN	n 212-214 ft: Cored through coarse gra iftic rock, approximately 6-inch rock com below). ID WITH GRAVEL; Reddish black [10R	e, about 1-foot rock	sw		
			14	į	0.1	220	(30,3	15% fine to coarse subrounded gravel 30,40); micaceous luster; 5% silt; iron o an 220-224 ft: Sand fines (50,40,10).	(90,10); sand xide staining.			
	į				0.6	225 —	From	n 224-227 ft: Sand coarsens (20,40,40)).		. O.	
						230 -	[10YI suba	WITH GRAVEL AND CLAY; Dark yello R 4/6]; dry to moist; 20% sand; 10-15% ngular to subrounded gravel; iron oxide s common; nonsticky; hard.	ciay; 15% fine	ML	.0	
			22		3.5	235 —						
;					6.2	245						
					0.1	250 —		7 ft: Color change to dark yellowish bro 0 ft: Decrease in gravel content to 5%.				
			12		0.3	255 —						

1-EKI STD - BH AND MW LOG PPF-DEEP-WELLS GPJ EKIF VS GDT 920/05



PRO				10114	01101	PRO	OJECT EKI A20034.03 T2	BOREHOLE /	PB-48		inc.
NAME	=		MPLES		_	NON	MBER EN A 20034.03 12	WELL NAME	T		
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	ОУМ (ррти)	DEPTH (feet)	MATERIAL DESCRIPTION AND DRI	LLING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTION
-			12		2.7	260 —	SILT WITH GRAVEL AND CLAY: Dark yel [10YR 4/6]; dry to moist; 20% sand; 10-15' subangular to subrounded gravel; iron oxid clasts common; nonsticky; hard.	% clay: 15% fine	ML		
			8		3.2	265 -					
					0.6	270 -	SANDY SILT: Dark greenish gray [10Y 3/1 interbeds of silty sand common up to 1.5 fe nonsticky; nonplastic.]; 30% sand; set; rare fine gravet;	ML		
			20		0.1	275 —					
					0.0	280 -					
					2.1	285	From 284-288 ft: Partially consolidated wit in very thin sheets.	h high mica content			
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			0.9	290	SAND; Dark greenish gray [10Y 3/1]; moist homogeneous; micaceous.	; 5% silt; loose;	SP		
15:30	PB48- 291-299	· · · · · · · · · · · · · · · · · · ·	13		1.4	295	<u>SILT WITH SAND</u> ; Dark greenish gray [10 ³ sand; 5% gravel (all fine except for large cointerval); subangular to subrounded; micac	bble at top of	ML		
					1.6	300 -	Total Depth of Borehole ≈ 301 feet.				
					:	305				:	
						310 —					

1-EKLSTO - BH AND MWLOG PPF-DEEP-WELLS GPJ EKIF V5 GDT 9/30/05



	ehole (EHOLE							<u> </u>				BOREHOLE /	<u> </u>		inc.
LOCA	TION	Ralst	on St	at I	Louvre	St., Pa	acoim	a, CA 				WELL NAME	PB-49		
DRILL COMI	.ING PANY	Prosc	onic,	inc.								PROJECT NAME	Price	-Pfister	
DRILL METH		Sonic	:									PROJECT NUMBER	EKI A	.20034.	03 T2
CONE CASII	DUCTOR NG	N/A	Α					DIAMETER (inches)	FROM (feet)	TO		DATE STARTED	5/16/05	DATE COMP	LETED 5/19/0
BLAN CASII		N/	Α			-		DIAMETER (inches)	FROM (feet)	то		BOREHOLE DIAM (inches)	6.0	TOTAL (feet)	DEPTH 251
PERF CASIN	ORATED VG	N//	A					DIAMETER (inches)	FROM (feet)	то		DATUM	MSL; SF	CS Zon	e 7 NAD27
GROL	JT }	High F	Perce	ent S	olids (Bentoni	te Slu	rry	FROM 0.0 (feet)	TO	251.0	TOP OF CASING		GROU SURFA	
SEAL		N//	A	FROM TO (feet)								LOGGED BY	Craig He	ebert	
FILTE: PACK		N/A	Д						FROM (feet)	то		CHECKED BY	Jeff Shav	w, RG #	7759
REMA		1 MVC	eadin	ıgs si	hown a	are unre	eliable	due to extreme heat	<u>. </u>	luced	by son	ic drilling.			
									<u>.</u> .	<u> </u>				T	<u> </u>
	• • • •		SAMP				Τ_						OE	90	WELL CONSTRUCTION
COLLECTED	의 의	SAMPLE TYPE	FRY	(feet)	BLOW COUNT	(Audi	DEPTH (feet)	MATERIAL	DESCRIPTIO	V ANI	D DRILL	ING NOTES	uscs code	GRAPHIC LOG	JUUNS IRUU II
777C	SAMPLE NAME	MP		(kee	эмс	ОУМ (ррту)	FPTH						USC	ЭРАР	
ত		27	5 0)JG	0	ğ								ļ , , , , , , , , , , , , , , , , , , ,
			3	.5				SAND WITH GR moist; 15-20% fir 3-inches diamete	ne to medium g	ravel	; clasts	range up to	sw	. 0	
i			-			1.5		2-mones diamete	и, эсим із жие 1	U U08	noc Aig	RIGU.		0	
				.5			5 -	_						. O.	
İ			-					SAND WITH GRA	AVEL; Brown [ravel, 5% silt, s	0YR and i	5/3]; lo s fine to	ose; dry; 20-25% coarse grained	6 SW	• •	
			`			2.8		(70,20,10). From 9-10.5 ft: L				·			
						22.3	10 -						914	ب المناه	
İ			9	,				SAND WITH GRA loose; slightly mo subangular), 5-10	ist; 25-30% fin	e to n	muiben	gravel (mostly	sw	6.0	
						2.8	1=	cobbles up to 4-ir						O.	
							15 -	-						· O	
					j	2.4		From 17-18 ft: Co	obbles up to 6-	inche	s diame	eter with rock		0 2	
						19.8	20 -	-						· · · · · · · · · · · · · · · · · · ·	17//
			8					_						. (y)	
						4.5		SAND WITH GRA					sw	, 0	
1		-				1.6	25 -	loose; slightly moi (likely rock flour).	ist; 20% fine to sand is mediur	medi n to c	ium gra coarse g	vel, trace silt			
İ						45.0		At 25 ft: Large co	VEL & SILT: Y	ellow	rish brov	wn (10YR 5/4):	_/[sw		
								loose; At 26.0 ft: medium grained o							
			10.	5			30 -	luster. scattered cobbles	up to 3.5-inch	es dia	meter				
						25.3		-							
					i			4							ת אה אה אה א



			00.	110676	101101	i Log						Inc.
PROJECT NAME	Price	-Pfis	ster			PRO NUI	OJECT MBER	EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-49		<u>-</u>
COLLECTED	SAMPLE NAME	SAMPLE TYPE 9	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)		MATERIAL DESCRIPTION AND D	RILLING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTI
			6.5		11.2 21.4 13.4 13.4	40 —	fine fines At 40 grave	(D): Dark yellowish brown [10YR 3/4] to medium gravel; sand is fine to media. Oft: Boulder and cobble layers (rockel (~25%) to 41 ft. bove but with 20% fine to coarse grave.	edium grained; 5-10%	SW		
			3.5		2.8	50 —	loose 20% lense From	Y SAND WITH GRAVEL: Yellowish e; slightly moist; 20% fine to medium sift; sand is fine to coarse grained; ses up to 2 cm. n 54-55 ft: Mostly rock flour with son	i gravel (10% coarse); scattered clay-rich ne rock fragments.	SM		
		 	9		1.2	65 —		n 56.5-57 ft: Mostly rock flour with so 0.5 ft: Decreasing silt content, % silt.	ome rock fragments.			
	°B49- 58-76	· · · · · · · · · · · · · · · · · · ·	9.5		3.8 8.4	70 75	SILT hard; fines.	ft: 8-inch zone of medium to coarse	ium to coarse 5/16/2005 YR 4/3]: moderately ed gravel; 15%-20%	SW SM		
			10		2.6	80 -	subro	Y SAND; Very dark grayish brown [1 wet; 25-30% silt (possibly micaceous unded gravel; fine to medium grained unded grayel; fine to medium grained unded grayel; fine to medium grained under gray [10YR 4/1]; loose; wet; ery appearance (most sand is distinction).	is); <5% fine ed sand (mostly fine).	SM		
		+	10	:		90 —	SILTY hard;	<u>r SAND;</u> Dark grayish brown [10YR wet; 15-20% silt; trace of clay; <5%	4/2]; moderately fine grave!.	SM		



Dolellole & W	Ch Consti	action	<u> </u>	<u> </u>	,		<u> </u>	Inc.
PROJECT Price-Pf	fister		PROJE NUMBE		BOREHOLE / WELL NAME	PB-49		
NAME COLLECTED SAMPLE NAME CAMPLE	RECOVERY (feet)	OVM (ppmv)	DEPTH (feet)	MATERIAL DESCRIPTION AND DRILL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTION
	10	3.2	95 - S - 1: S	AND: Grayish brown [10YR 5/2]; loose; we and; 10% subangular gravel. ILTY SAND: Dark grayish brown [10YR 4/25-20% silt; trace of clay; <5% fine gravel. AND: Dark grayish brown [10YR 4/2]; loose	21: loose: wet;	SM SP SM SP		
	2		00 - S	ightly coarser sand (20,50,30). t 101 ft: Gravel layer. ightly finer sand (40,40,20).				
PB49- 104- 4 111, 4 111, 4 104- 111D 4	11	10.8	05 — SI	ightly coarser sand (20,50,30).				
	16	0.1	siz SA we	115 ft: Increasing gravel content (20-25% red clasts). NO WITH GRAVEL; Dark gravish brown [abt 25% fine to coarse gravel; 5% silt; fine to me intervals with trace silt (4-6-inches).	10YR 4/2]; loose;	_/ sw	0.00.00	
	8		- fin- co zo Fro diff	ND WITH GRAVEL; Brown [10YR 5/3]; lore is to coarse gravel (mostly medium to coarse grained sand; scattered brown cobbleines (2-3-inches) with slity sand, om 127-131 ft; Core is severely mashed discutties. 131 ft: As above with trace fines (<5%) and the companion of the compan	se); medium to es; some small ue to drilling	sw		
	13	14	At SIL SAL SAL SAL SAL SAL SAL SAL SAL SAL SA	137 ft: Gravel becomes mostly fine to med TY SAND; Gray [10YR 5/1]; moderately h 35% silt; 5% fine gravel; fine to medium grostly fine). ND WITH GRAVEL; Gray [10YR 5/1]; loos ntinuation of sand with gravel observed from ND WITH GRAVEL; Grayish frown [10YR	ard; moist to wet; rained sand se; wet; m 124.5 to 139 ft. t 5/2]: loose; wet;	SM SW		
		14	5 <u>SA</u>	20% fine to coarse gravel; fine to medium ND WITH GRAVEL; Grayish brown [10YR % fine to medium gravel; fine to coarse sar	5/2]; loose; wet;	SW	0	



	***	11 001	nstruc	Juon		 	Lacasinoisi	<u> </u>	1	inc.
PROJECT Price	e-Pfis	ter				DJECT MBER EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-49		
TIME COLLECTED SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	вгом сопит	OVM (ppmv)	DEPTH (feet)	MATERIAL DESCRIPTION AND DRIL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTI
16:30 PB49- 153-160		7 4		0.5 1.2 0.7 0.3 1.2	155 - 155 - 170 - 175 - 1	From 146-148 ft: Increasing gravel size fro to fine to coarse with a large number of cob rock pieces up to 5-inches diameter (up to a cobbles). SAND WITH GRAVEL; Grayish brown [10Y 20% fine to medium gravel; fine to coarse s At 150 ft: Decrease in average sand size (3 mostly fine. At 158 ft: Increase in gravel size (mostly mostly fine. SILTY SAND WITH GRAVEL; Yellowish brown with large amounts of broken rock. SILTY SAND WITH GRAVEL; Yellowish brown decretely hard; moist to wet; 25% silt (with rounded medium to coarse gravel; fine to mand. SAND WITH GRAVEL; Dark grayish brown wet; 15-20% fine to medium gravel; medium (mostly coarse). SAND: Brownish yellow [10YR 6/6]; loose; with medium gravel with scattered coarse graine cobbles; fine to coarse grained sand (mostly medium to coarse); trace fines; sightly oxidized appearance. SAND WITH GRAVEL; Dark grayish brown fine to medium gravel (occasional larger classand (mostly medium to coarse); trace fines SAND WITH GRAVEL; Brownish yellow [10 wet; 15-20% fine to medium;); slightly oxidized as and (mostly fine to medium;); slightly oxidized as seen in 170.5-173.5 ft interval). SAND; Yellowish brown [10YR 5/4]; loose; with medium gravel; fine to coarse sand (mostly <10% sand is coarse).	bles and broken 40% gravel and (R 5/2]; loose; wet; and (mostly fine). 30,50,20); gravel is edium to coarse) bown [10YR 5/4]; in some clay); 15% edium grained [10YR 4/2]; loose; and or coarse sand wet; 10% fine to coarse sand y medium); trace [10YR 4/2]; 20% sts); fine to coarse ed appearance. Impeter) of broken zone (same sand wet; 5-10% fine to	SM SW SW		
PB49- 200-210		21		4.6 0.1 0.3	90 95 7	At 182 ft. Scattered coarse gravel and cobb From 184.5-185.5 ft. Medium to coarse san gravel. SAND WITH GRAVEL: Yellowish brown [10] wet; 15-20% fine gravel (scattered larger clacoarse grained sand; little to no fines.	id layer with YR 5/6}; loose;	SW		

MATERIAL DESCRIPTION AND DRILLING NOTES See See See See See See See See See S	PROJECT Pric	ce-Pfister	г				DJECT EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-49		
13.45 PB49 200-210 21 20 1.6 1.6 1.6 21 21 22 23 20 20 21 20 20 21 20 20 21 20 20	TIME COLLECTED SAMPLE NAME			BLOW COUNT	ОУМ (ррти)	DEPTH (feet)	MATERIAL DESCRIPTION AND DR	RILLING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTION
SAND; Gray (10 YR 5/1); At 246.5 it: 6-inch layer of clayey sand: gray; up to 25-30% clay; fine to medium sand.	12:45 PB49-	中华 中华 中华 中华 中华 中华 中华 中华 中华 中华 中华 中华 中华 中	21 2 13	1. 17 0. 16. 24.	6 22 23 3 23 4 24 8 24	10 15 20 25 30 35 0	SAND WITH GRAVEL; Yellowish brown [wet; 15-20% fine gravel (scattered larger coarse grained sand; little to no fines. At 204.5 ft: Increasing fine to medium san SILTY SAND; Dark grayish brown [10YR- hard; wet; 25-30% silt; very fine to fine san coarse sand to medium gravel. SAND WITH GRAVEL; Dark grayish brow wet; same as 188.5-207 ft interval. SILTY SAND; Dark grayish brown [10YR- hard; moist to wet; 30-35% silt; trace of cla very fine to fine; 5% coarse sand to mediu (subrounded). At 213 ft: 1-foot layer with large broken ro rock flour. At 218 ft: Decreasing silt content and grav At 219 ft: 6-inch zone with thin (1 cm) clay gray); sediment contains large amount of from 220-221 ft: Atternating zones (1-2-ir SAND WITH CLAY stringers and very fine sand. SAND WITH GRAVEL; Yellowish brown [10 Wet; 10-15% fine to medium gravel; fine to (mostly medium). SANDY SILT WITH GRAVEL; Light yellowish semi-consolidated; 40% very fine to coars SANDY SILT WITH CLAY; Light yellowish sediment with above description is interbe- clay-rich dark gray material similar to lithol 229 ft. SANDY CLAY; Light yellowish brown [10 Yhard; slightly moist to dry; up to 30% fine to 30% silt; <5% fine to medium subangular to core is semiconsolidated and mostly rubbli finely laminated siltstone and clay-rich sec- Light gray fine to medium sand common in intervals; bed typically appears truncated; lithification/consolidation varies greatly. From 238.5-240.5: Clay-rich zone with up I From 242-245: Core material appears to be lithified and more distinct shaley/siltstone/s zones; core appears to alternate 4-8-inch i clay-rich/silt-rich zones, with more scattere sands. core is lightly rubblized making it difficult to detait; in clay rich zones there are visible fr slickersides but these may be drilling artifa At 245 ft: Lithology is similar to description interval.	10YR 5/6]; loose; clasts); medium to nd fraction. 4/2]; moderately nd; minor (5%) In [10YR 4/2]; loose; day; sand is mostly im gravel lick fragments and look fragments and look fragments and look fragments and look fragments and look fragments and look fragments and look fragments and look fragments and look fragments (dark muscovite, cohes) of SILTY grained micaceous look 5/6]; loose; look fragments and look from [10YR 6/4]; ded with more look fragments and; look fragments and look fragments and look from look fragments and look fragment	SW SM SW SM CL		



BOREHOLE LOCATION	Sutter St. at Louvre St., Pa	icolma, California		BOREHOLE / PB-50 WELL NAME PB-50						
DRILLING COMPANY	Prosonic, Inc.	onic, Inc. PROJECT NAME Price-								
DRILLING METHOD	Sonic				PROJECT NUMBER	EKIA				
CONDUCTOR CASING	N/A	DIAMETER (inches)	FROM (feet)	то	DATE STARTED	4/25/05	DATE COMPLETED	4/29/05		
BLANK CASING	N/A	DIAMETER (inches)	FROM (feet)	70	BOREHOLE DIAM (inches)	6.0	TOTAL DEPTH (feet)	300		
PERFORATED CASING	N/A	DIAMETER (inches)	FROM (feet)	то	DATUM	MSL; SP	PCS Zone 7 NAD	027		
GROUT	High Percent Solids Bentor	nite Slurry	FROM 0.0 (feet)	⁷⁰ 300.0	TOP OF CASING		GROUND SURFACE	1029.49		
SEAL	N/A		FROM (feet)	TO	LOGGED BY	Jeff Shaw, RG #7759				
FILTER PACK	N/A		FROM (feet)	70	CHECKED BY	Jeff Shaw, RG #7759				

REMARKS OVM readings shown are unreliable due to extreme heat of the core produced by sonic drilling.

		SA	MPLES				<u> </u>			. <u>-</u>
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)	MATERIAL DESCRIPTION AND DRILLING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTION
			0 4.5 10.5		0.3 1.3 0.1 6.4	10	ASPHALT AND BASEROCK SAND WITH GRAVEL: Dark grayish brown [10YR 4/2]; medium to coarse grained sand; loose; moist to wet; 15% fine to medium gravet. SAND WITH GRAVEL AND SILT; Brown [10YR 4/3]; fine to coarse grained sand; loose; dry; 25% fine to medium gravet, 10% silt; cobbles up to 3-inches diameter. At 9 ft: Rockflour, cobbles. At 15 ft: Rockflour, cobbles. At 22 ft: Locally silt-enriched core; minor increase in dry strength. Silty SAND WITH GRAVEL; Brown [10YR 4/3]; loose; moist; 20% fine to medium gravet, 15% silt. At 26.0 ft: Approximately 6-inch sand lens of black, medium grained clean sand (10YR 2/1); slight micaceous luster.	SW-SM		
	TIME	COLLECTED SAMPLE NAME		COLLECTED SAMPLE NAME COLLECTED SAMPLE NAME COLLECTED SAMPLE NAME (Feet)	9	COLLECTED SAMPLE NAME NAME 0 0 0 0 (feet) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	COLLECTED COLL	MATERIAL DESCRIPTION AND DRILLING NOTES MATERIAL DESCRIPTION AND DRILLING NOTES MATERIAL DESCRIPTION AND DRILLING NOTES ASPHALT AND BASEROCK SAND WITH GRAVEL. Dark grayish brown [10YR 4/2]: medium to coarse grained sand; loose; moist to wet; 15% fine to medium gravel. SAND WITH GRAVEL AND SILT: Brown [10YR 4/3]; fine to coarse grained sand; loose; dry; 25% fine to medium gravel. 10% silt; cobbles up to 3-inches diameter. At 19 ft: Rockflour, cobbles. 4.1 9 ft: Rockflour, cobbles. 4.2 15	MATERIAL DESCRIPTION AND DRILLING NOTES SW MATERIAL DESCRIPTION AND DRILLING NOTES AT 15 L L L L L L L L L L L L L L L L L L	MATERIAL DESCRIPTION AND DRILLING NOTES SOUTH OF STREET CONTRACT ON STREET CONTRACT OF STREET CONTRACT OF STREET CONTRACT OF STREET CONTRACT ON S



PROJE NAME	ECT Pric	e-Pfi		-		PRO NUI	OJECT MBER	EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-50		ine.
SAMPLES									<u> </u>		//	
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	ОУМ (ррти)	DEPTH (feet)		MATERIAL DESCRIPTION AND DRI	LLING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTIO
		-	9		0.0	-	20%	Y SAND WITH GRAVEL; Brown [10YF fine to medium gravel, 15% silt. 5 ft: Cobbles up to 3-inches diameter.	R 4/3]; loose; mois	; SM		
			10		9.4	40 -						
					0.0	45 -	10% SILT	D; Dark yellowish brown [10YR 4/6]; lo fine gravel, 5% silt; weak iron-oxide st Y SAND WITH GRAVEL; Brown [10YF Ity moist; 15% silt; 15% fine to medium non	aining. R 4/3]; loose;	SM		
			10		16.6	50 —	From	48-50 ft: Rock flour is major component Y SAND WITH GRAVEL: Brown [10YF	R 4/3); loose to	SM		
					12.8	55	mode medi 20%	erately hard; moist to slightly moist; 20 um gravel; interbeds common from 53 clay.	% silt; 20% fine to -56 feet with up to			
					12.0	60 —		: 57-65 ft: Intervals with darker color; in clay common.	ncreasing silt with			
			9.5		2.0	-						
		***			0.5	65 —	SAND	2; fine to coarse grained sand, but pred	4/25/0	5 ▼		
16:10	PB50- 66-77	· · · · · · · · · · · · · · · · · · ·	7.5		0.1	70 -	coars	im-grained; loose to moderately dense e gravel (up to 4-inches diameter).	e; wet; 5% line to			
		*****	į		0.5	75 -						
						80 -	SILTY sand;	' <u>SAND</u> : Dark brown [10YR 3/3]; fine to moderately soft to soft; wet; 35% silt;	o coarse grained trace of gravel.	SM		
			10		0.4	85						
			11.5		0.0	90				SP		



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PROJE NAME	CT Price	-Pfis	ter			PRO NUM	DJECT EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-50		
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	OVM (ppmv)	DEPTH (feet)	MATERIAL DESCRIPTION AND DRIL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTI
10:05	PB50- 93-100	/8 日本申申申申申申申申申申申申申申申申申申申申申申申申申申申申申申申申申申申申	11.5	18	0.0	95 —	SAND; Brown [10YR 4/3]; medium to coarse loose; wet; 5% medium to coarse gravel; classification subrounded to subangular.	e grained sand; asts are	SP		
			17		0.0	105					
			9.5		0.8	120	SAND WITH GRAVEL; Brown [10YR 4/3]; m grained sand; loose; wet; 20% fine gravel; cl to subrounded.	edium to coarse asts are rounded	sw		
			10		0.6	130 —	At 130 ft: Interval of cobbles greater than 4-	inches diameter.			
4:55	PB50- 143-150	李 等 布 作 空 专	12		1.0	140	At 138 ft: Color change to lighter shade of b	rown (10YR 5/3).			

1-EKI STD - BH AND MIVLOG PPF-DEEP-WELLS GPJ EKIF V5 GDT 8/30/05



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PROJE NAME	ECT Price	-Pfis	ter			PRC NUN	NECT EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-50		
		SA	MPLES					- 		//	
TIME	SAMPLE NAME	SAMPLE TYPE	RECOVERY (feet)	BLOW COUNT	ОУМ (рртv)	DEPTH (feet)	MATERIAL DESCRIPTION AND DRIL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTION
14:55	PB50- 143-150	李 李 寿 春 本 — —	12		0.2	150 —	SAND WITH GRAVEL; Brown [10YR 4/3]; in grained sand; loose; wet; 20% fine gravel; c to subrounded.	nedium to coarse dasts are rounded	SW		
			16		0.4	155 —	SAND WITH GRAVEL: Brown [10YR 5/3]; in grained sand, with some intervals fine to me sand; dense; wet; 30% fine to coarse gravel subrounded; sand is medium to coarse; somedium.	edium grained ; rounded to	- sw		
			:		0.2	165	SAND; Yellowish brown [10YR 5/4]; medium sand; loose; wet	to coarse grained		. O.	
					0.0	170	SAND WITH GRAVEL; Brown [10YR 5/3]; fingrained sand; dense; wet; 15% fine to medic	ne and coarse um gravel, 5% silt.	SW		
		+	7		1.3	175 —	At 180 ft: Large cored cobble (7-inches on lo cobble fragments.	ong axis); other			
11:30	PB50- 193-200	· · · · · · · · · · · · · · · · · · ·	10		0.2	195	SILTY SAND WITH CLAY; Brown [10YR 4/3] to hard; moist to wet; 30% silt, 20% clay; weak bedding; cobbles greater than 4-inches diamed at 191 ft: Cobbles cored through. SAND WITH GRAYEL; Yellowish brown [10Y wet; 20% fine to coarse gravet; cobbles of moderately weathered granitic rocks common 3-4-inches diameter; variable iron-oxide stail	ak subhorizontaf leter common. /R 5/4]; dense; ghly to n; generally			
			6		16.1	+		 	SM		
		حلحن								411	



DOO ICOT	,		Log	·	I noncuor e /			Inc.
PROJECT Pric	e-Pfişter		PRO	0JECT EKI A20034.03 T2	BOREHOLE / WELL NAME	PB-50		
	SAMPLES	_						
TIME COLLECTED SAMPLE NAME	SAMPLE TYPE RECOVERY (feet) BLOW COUNT	OVM (ppmv)	DEPTH (feet)	MATERIAL DESCRIPTION AND DR	ILLING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRU
	6	151	205 —	SILTY SAND WITH GRAVEL: Yellowish be moderately hard to hard; slightly moist; 30 gravel, 20% silt, 5% clay; cobbles of very wand volcanic rocks common; some rocks s	% medium to coarse weathered granitic	SM		
	0	181	210 —			į		
	4.5	221	215 -	SAND WITH GRAVEL; Dark grayish brown coarse grained sand; soft; wet; 30% fine to silt; gravel clasts are rounded to subrounde 3-inches diameter.	coarse gravel, 5%	sw		
	9	22.7	220 —	SANDY SILT WITH GRAVEL: Dark grayish moderately hard; moist; 25% fine to mediu medium to coarse grained sand, 10% clay; subhorizontal irregular bedding; core is frag	m gravel, 30% ; weak	ML		
		19.2	225 -	SAND: Dark yellowish brown [10YR 4/4]; regrained sand; dense to hard; moist; 5% grasemiconsolidated.		SP		
		0.8	230 —	SAND WITH GRAVEL AND CLAY; Yellowi [10YR 5/4]; moderately soft; moist; 20% fin 10% ctay; rounded to subrounded cobbles	e to coarse gravel,	sw		
	21	4.9	235 —	2-inches diameter common; thin (1-2 cm) becay common; irregular bedding. CLAYEY SANO, Dark brown [7.5YR 3/4]; figrained sand; moderately hard; moist; 10%	ne to medium	sc		
		13.6	240					
	+	11.7	245	SAND; Brownish yellow [10YR 6/6]; mediur sand; soft to loose; moist to wet CLAYEY SAND; Brownish yellow [10YR 6/6] grained sand; dense to soft; moist; 30% cla	6]; fine to medium	SP SC		
		21.7	250	SAND; Yellow [10YR 7/6]; medium to coars dense to soft; moist to wet; massive; moder staining at base.	rate iron-oxide	SP	/// 	
	10	27.5	255	SANDY CLAY; Brown [10YR 4/3]; moderate moist; up to 50% fine to medium sand; intercolor is generally brown but is masked by invariable intensity; sand intervals range from thickness; fractured; core is mostly rubble.	rbedded; chaotic; on-oxide stains of	CL		



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PROJECT Price-P	fister		PROJE¢ NUMBE		BOREHOLE / WELL NAME	PB-50		
<u> </u>	RECOVERY (feet)	OVM (ppmv)	DEPTH (feet)	MATERIAL DESCRIPTION AND DRILL	LING NOTES	USCS CODE	GRAPHIC LOG	WELL CONSTRUCTIO
1-EKI STD - BH AND MWLOG PPF-DEEP-WELLS GPJ EKIF VS GDT 8/30/05	9	26.5 26.5 26 15.3 27 4.0	Silie sa Sim covat the Silie sa Sim covat the Silie sa Si	lip planes commonly visible in clay interbed essegang-type iron-oxide banding rarely visibility in upper 1 foot of unit. ANDY CLAY; Brown [10YR 4/3]; moderately loist; up to 50% fine to medium sand; interbotor is generally brown but is masked by ironable intensity; sand intervals range from ickness; fractured; core is mostly rubble. AND WITH CLAY; Gray [10YR 6/1] and verous over 3/1; fine grained sand; slightly moist iterbedded; sand is gray and clay is very day added to laminated; weak to locally strong from only distorted; rare locally intense ironand intervals. 1268.5 ft; Thicker (6-inch) clay interbeds. 1273.5 ft; Thicker (6-inch) clay interbeds. ANDY CLAY; Dark gray [10YR 4/1] and lightly is dark gray, sand is light gray; clay predict the tomedium grained sand; dense to hard; ay is dark gray, sand is light gray; clay predicteds (~1 cm) and laminae (~1-2 cm) of sammon; thin interbeds (~1 cm) of clay with viso common; beds and laminae commonly distorated. Detertably common slip planes in clay; sand immonly show foliation with oriented musconstity rubble. The property of Borehole = 300 feet.	ible in sand; y hard; dry to hedded; chaotic; n-oxide stains of mm to 5 cm in ry dark gray to dry; rk gray; thinly foliation; oxide staining in oxide staining in oxide staining in oxide staining in oxide staining in oxide staining in oxide staining in oxide staining in oxide staining in oxide staining in oxide staining in oxide staining in oxide staining in oxide staining in oxide staining in oxide staining in oxide staining in oxide staining in oxide staining in			